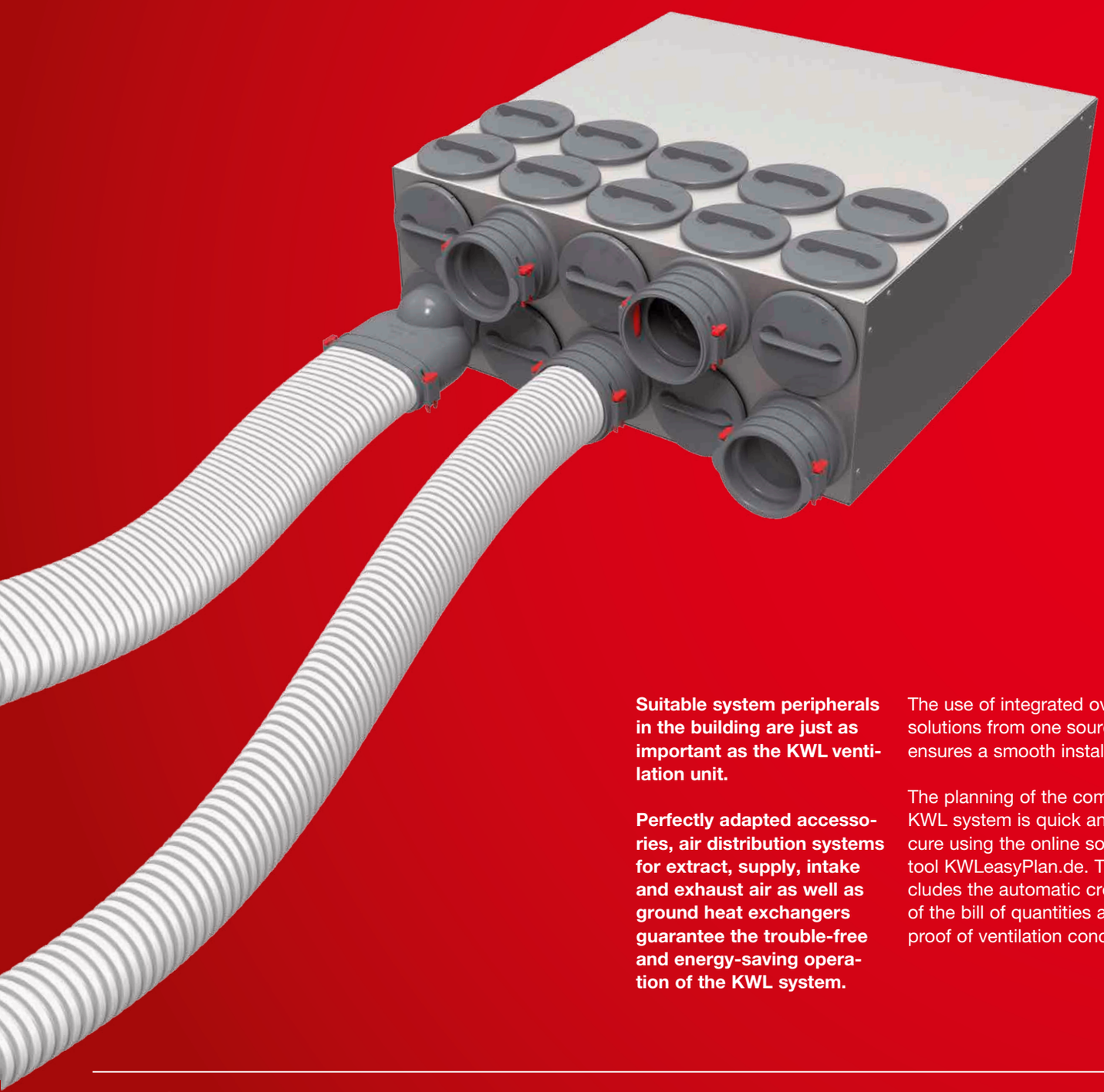
Everything from one source.
For the perfect functioning of the KWL® system.



Suitable system peripherals in the building are just as important as the KWL ventilation unit.

Perfectly adapted accessories, air distribution systems for extract, supply, intake and exhaust air as well as ground heat exchangers guarantee the trouble-free and energy-saving operation of the KWL system.

The use of integrated overall solutions from one source ensures a smooth installation.

The planning of the complete KWL system is quick and secure using the online software tool KWLeasyPlan.de. This includes the automatic creation of the bill of quantities and proof of ventilation concept.

Accessories

170f

Flexible duct system flex*pipe*

The right solution for every type of installation. **flex***pipe*plus combines the proven round duct concept with oval components.

This makes the planning and installation of complete ventilation systems with heat recovery much easier and DIN-compliant.

flex*pipe*plus provides the greatest possible flexibility with low parts diversity.

152ff

Duct system IsoPipe and air distribution system reno*pipe*

IsoPipe is the practical alternative to spiral duct installation with subsequent thermal insulation. Since it is already fully insulated, IsoPipe is ideally suitable for intake air and exhaust air ducting as well as supply air and extract air ducting in basements or low-temperature zones.

reno*pipe* is the perfect solution for energy-saving renovations and it is simply surface-mounted to the ceiling or wall.

164ff

KWL MultiZoneBox

When combined with a central building KWL unit from Helios, the MultiZoneBox ensures demand-oriented ventilation in multi-floor buildings.

Supply/extract air-side volume flow control, sound insulation, air distribution and intelligent system control – the KWL MultiZoneBox combines all seven components in one unit.

160f

KWL HygroBox and ground heat exchanger

As an active humidification unit, the **HygroBox** ensures a health room air humidity throughout the year and prevents expensive damage to furniture, floor coverings, etc.

Optional **ground-to-brine or ground-to-air heat exchangers** guarantee that the intake air is always energy-optimised when it flows into the ventilation unit.
This saves even more energy in winter and results in intake air temperature reduction in summer.

172ff

flex*pipe*plus round and oval ducting system. Arbitrarily combinable.

flex*pipe*plus is the further development of the successful flex*pipe* air distribution system and it combines round and oval ducts in one smart system package with all conceivable round-oval combinations.

The oval duct has the identical hydraulic cross-section and pressure loss as the round duct as well as a point-symmetric design.
This results in unique advantages:

- No matter if it's planning and layout or installation and adjustment or maintenance, round and oval pipe behave completely identical.
- Depending on the structural circumstances, the optional change between round and oval ducts is possible using adapters, both in line and away from the distribution box. This provides the greatest possible planning and installation freedom.
- The ideal, economical option can be selected at any time. The space-saving oval duct is mainly used if low installation heights are required.
- The round-oval compatibility results in low parts diversity. The stocking and consultation processes are greatly simplified. The installation is almost intuitive.
- The point-symmetric oval design allows installation from horizontal to vertical without the use of adapters for position correction.

Reference
flex*pipe* round duct system with ext. Ø 63 mm, int. 52 mm
for volume flows up to 20 m³/h
see page162

flex*pipe*plus is available in two designs which can be combined as required:

- FRS 75, round:
  External Ø: 75 mm, internal: 63 mm for volume flows up to 30 m³/h. For installation in concrete ceilings. High ring strength (STIS ≥ 10 kN/m² according to DIN EN 9969). Bending radius horizontal and vertical 150 mm.
- FRS 51, oval:
  51 x 114 mm, for volume flows up to 30 m³/h, ideal for space-saving installation e.g. on unfinished floors or in walls. Bending radius horizontal 300 mm, vertical 200 mm.

Installation, handling, commissioning

- Ultra-simple planning thanks to identical duct cross-sections and pressure losses.
- Quick installation due to radial, flexible endless installation from the roll.
- Construction site-compliant handling due to its low weight.
- Quick commissioning due to minimal adjustment effort.
- Uniform air distribution.
- Hygienically optimal and easy to clean.

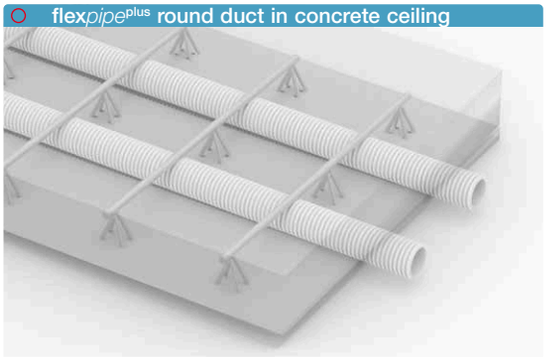
Duct properties and advantages

- Special round and oval ventilation duct made of hygienically safe PE-HD new material.
- Two-layer design – externally corrugated and internally smooth and antistatic. This minimises the pressure losses and prevents flow noises and dirt deposits.
- The extreme horizontal and vertical bending elasticity of both duct geometries minimises the number of necessary moulded parts.
- The point-symmetric design allows the installation of the oval duct from horizontal to vertical, upwards or downwards, without the use of adapters.

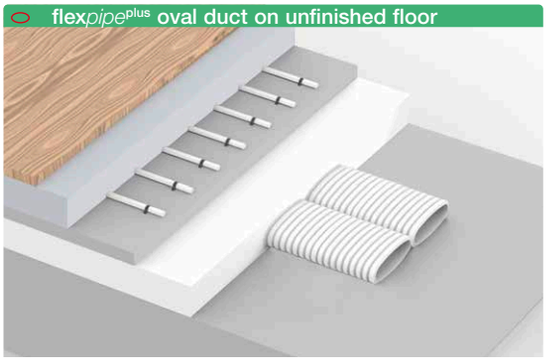
Duct concept, installation

- Mounting clips on all moulded parts for secure fixation to floors, walls or ceilings.
- Detachable mounting brackets guarantee quick, tear-proof duct fixation to all connection points.
- No additional cross talk silencer due to sound-insulating distribution box.
- Precision-fit seal system on all moulded parts for leak-free air transportation.
- Aerodynamically optimised ceiling and floor boxes as well as wall outlets are available for the use of room-side inlet and outlet elements at the duct ends. These have two parallel duct connections for delivering the volume flows required according to DIN 1946-6 with low pressure loss.

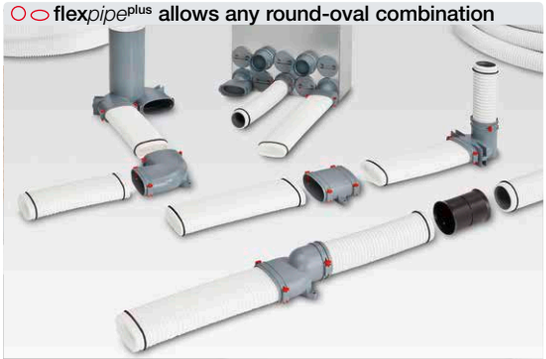
flex*pipe*plus round duct in concrete ceiling



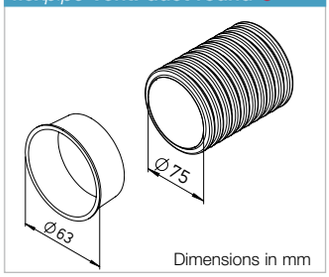
flex*pipe*plus oval duct on unfinished floor



flex*pipe*plus allows any round-oval combination



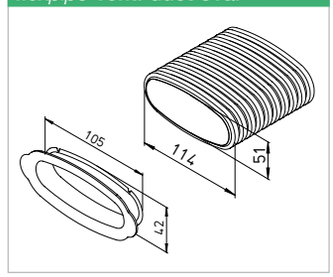
flex*pipe* vent. duct round ○



flex*pipe* vent. duct (bundle = 50 lin. m)			
Type Ø 75 mm	Ref. no.	Dim. in mm Ext. Ø	Int. Ø
FRS-R 75 ○	02913	75	63
Hygiene duct shutter cover			Unit
FRS-VD 75 ○	02915		10 pcs.

Flexible round duct made of PE-HD, ideal for installation in concrete ceiling.
Includes two hygiene duct shutter covers, can also be ordered separately.

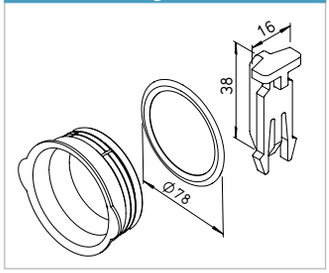
flex*pipe* vent. duct oval ⬭



flex*pipe* vent. duct (bundle = 20 lin. m)			
Type 114 x 51 mm	Ref. no.	Dim. in mm Width	Height
FRS-R 51 ⬭	03850	114	51
Hygiene duct shutter cover			Unit
FRS-VD 51 ⬭	03866		10 pcs.

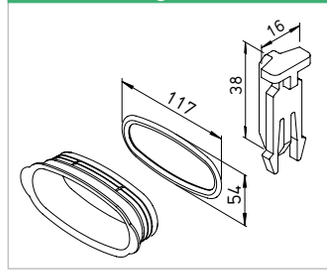
Flexible oval duct made of PE-HD, for space-saving installation on unfinished floors, installation in walls or suspended ceilings. Includes two hygiene duct shutter covers, can also be ordered separately.

Cover, seal ring, bracket ○



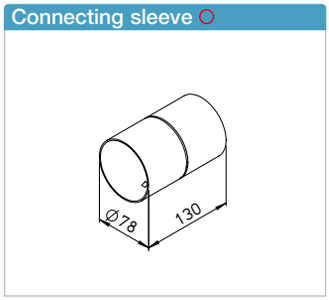
Connector cover / seal ring / bracket		
Type Ø 75 mm	Ref. no.	Unit
Connector shutter cover with seal ring		
FRS-VDS 75 ○	03855	1 pc.
Seal ring		
FRS-DR 75 ○	02916	10 pcs.
Bracket, detachable		
FRS-FK ○ ⬭	03854	10 pcs.

Cover, seal ring, bracket ⬭



Connector cover / seal ring / bracket		
Type 114 x 51 mm	Ref. no.	Unit
Connector shutter cover with seal ring		
FRS-VDS 51 ⬭	03856	1 pc.
Seal ring		
FRS-DR 51 ⬭	03864	10 pcs.
Bracket, detachable		
FRS-FK ○ ⬭	03854	10 pcs.

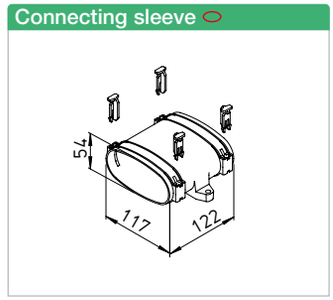
Connecting sleeve ○



Connecting sleeve	
Type Ø 75 mm	Ref. no.
FRS-VM 75 ○	02914

Connecting sleeve for round duct FRS-R 75 with tear-off protection on both sides, made of polyethylene.

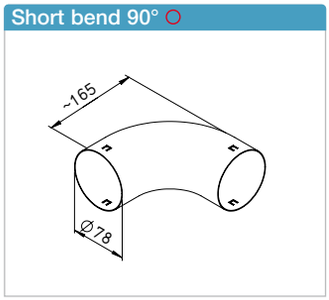
Connecting sleeve ⬭



Connecting sleeve	
Type 114 x 51 mm	Ref. no.
FRS-VM 51 ⬭	03862

Connecting sleeve for oval duct FRS-R 51.
With integrated fastening tabs, includes duct mounting brackets (4 pcs.).
Made of impact-resistant polypropylene.

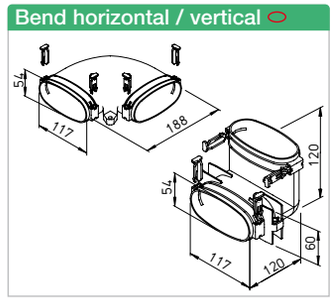
Short bend 90° ○



Short bend 90°	
Type Ø 75 mm	Ref. no.
FRS-B 75 ○	02994

Short bend 90° for bending radii < 2 x round duct external diameter. Horizontal and vertical application with tear-off protection on both sides.
Made of galvanised steel sheet.

Bend horizontal / vertical ⬭



Bend horizontal / vertical	
Type 114 x 51 mm	Ref. no.
FRS-BH 51 ⬭	03863
FRS-BV 51 ⬭	03859

Horizontal or vertical bend 90°.
With integrated fastening tabs, includes duct mounting brackets (4 pcs.).
Made of impact-resistant polypropylene.

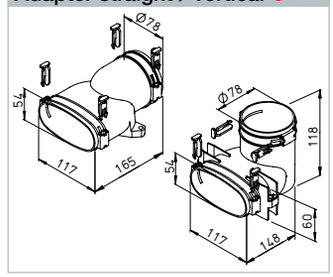
■ Optional possibility to combine round and oval ducts

- ▢ With **flex***pipe*plus from Helios, you rely on <u>one</u> system and you have the ideal solution at your fingertips at all times, depending on building requirements.
- ▢ The ultra-flat (only 51 mm) oval duct is used if low installation heights are required. The proven duct lends itself for direct embedding in concrete ceilings.
- ▢ Thanks to the identical hydraulic cross-sections and pressure losses of the two ducts and due to well-conceived system components, round and oval ducts can be combined in any way – both in line and away from the distribution box.

Vertical and horizontal adapters allow any round/oval, oval/oval and round/round combination.

The distribution boxes can be equipped with round and oval single connectors and mixed connectors.

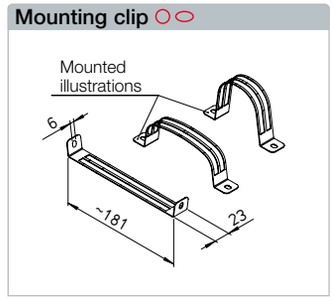
Adapter straight / vertical ○ ⬭



Adapter straight / vertical	
Type Ø 75 mm / 114 x 51 mm	Ref. no.
Adapter straight	
FRS-ÜG 51-75 ○ ⬭	03861
Adapter vertical	
FRS-ÜV 51-75 ○ ⬭	03860

Horizontal and vertical adapter from round duct FRS-R 75 to oval duct FRS-R 51.
With integrated fastening tabs, includes duct mounting brackets (4 pcs.).
Made of impact-resistant polypropylene.

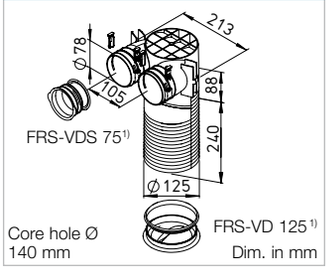
Mounting clip ○ ⬭



Mounting clip		
Type Ø 75 mm / 114 x 51 mm	Ref. no.	Unit
FRS-BS ○ ⬭	03869	10 pcs.

Mounting clip for round duct FRS-R 75 and oval duct FRS-R 51.
For non-slip duct fixation.
Made of galvanised steel sheet.

Ceiling / wall box ○

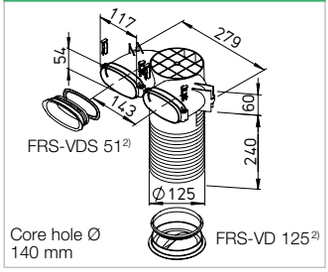


Ceiling / wall box	
Type Ø 75 mm	Ref. no.
FRS-DWK 2-75/125 ○	03857
Extension for ceilings > 240 mm	
FRS-VV 125 ○ ⬭	03906

Ceiling / wall box for max. 2 round ducts FRS-R 75. For connection of supply / extract air valves DN 125. Height marks can be shortened to fit. Per 1 pc. connector blind cover DN 75, DN 125.

1) Integr. mounting clips, duct mounting brackets (4 pcs.), made of impact-resistant polypropylene.

Ceiling / wall box ⬭

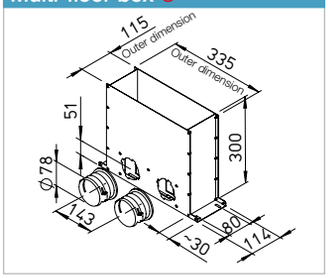


Ceiling / wall box	
Type 114 x 51 mm	Ref. no.
FRS-DWK 2-51/125 ⬭	03858
Extension for ceilings > 240 mm	
FRS-VV 125 ○ ⬭	03906

Ceiling / wall box for max. 2 oval ducts FRS-R 51. For connection of supply / extract air valves DN 125. Height marks can be shortened to fit. Per 1 pc. connector blind cover 51 mm, DN 125.

2) Integr. mounting clips, duct mounting brackets (4 pcs.), made of impact-resistant polypropylene.

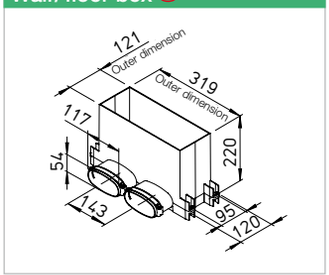
Multi-floor box ○



Multi-floor box	
Type Ø 75 mm	Ref. no.
FRS-MBK 2-75 ○	03872

Multi-floor box for connection of max. 2 round ducts FRS-R 75. Suitable for embedding in concrete ceiling, consists of:
– Floor box with air volume control insert in robust sheet metal design
– 2 pcs. connectors (round) and 1 pc. connector cover with seal (round)

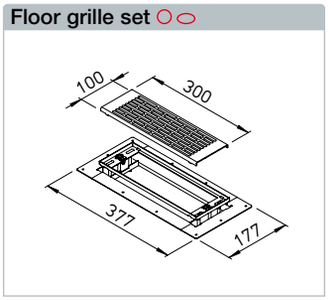
Wall / floor box ⬭



Wall / floor box	
Type 114 x 51 mm	Ref. no.
FRS-WBK 2-51 ⬭	03877

Wall / floor box for connection of max. 2 oval ducts FRS-R 51. Installation in walls or on unfinished floor, consists of:
– Plastic box made of impact-resistant polypropylene with air volume control insert. For use with FRS-WGS or FRS-BGS.
– 1 pc. connector cover with seal (oval).

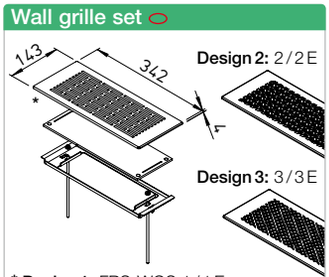
Floor grille set ○ ⬭



Floor grille set	
Type	Ref. no.
FRS-BGS 1 ○ ⬭	03878

Floor grille set made of stainless steel for multi-floor box FRS-MBK 2-75 and wall / floor box FRS-WBK 2-51, consists of:
– Grille frame with height adjustment for barrier-free installation in the floor covering
– Anti-puncture design floor grille
– Insert filter (replacement filter mats ELF-BGS, Ref. no. 03914, unit = 2 pcs.)

Wall grille set ⬭

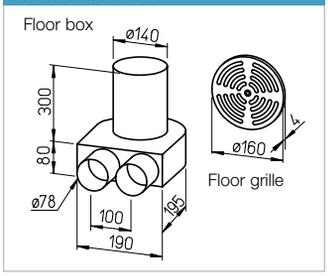


* **Design 1:** FRS-WGS 1 / 1 E

Wall grille set		
Type	Ref. no.	
FRS-WGS 1 ⬭	03881	white
FRS-WGS 2 ⬭	03882	white
FRS-WGS 3 ⬭	03883	white
FRS-WGS 1 E ⬭	03886	Stainl. steel
FRS-WGS 2 E ⬭	03892	Stainl. steel
FRS-WGS 3 E ⬭	03904	Stainl. steel

Wall grille set with installation frame and insert filter for FRS-WBK 2-51. See p. 110 for grille designs.

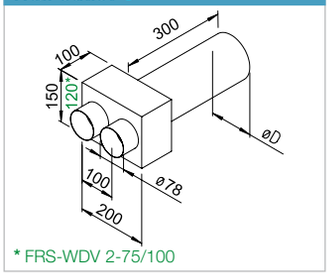
Floor box set ○



Floor box set	
Type Ø 75 mm	Ref. no.
FRS-BKGS 2-75 ○	09992

Floor box set consists of:
– 1 pc. floor box for grille connection DN 160
– 1 pc. floor grille made of brushed stainless steel with adjustable volume flow
– 1 pc. cover

Wall outlet ○

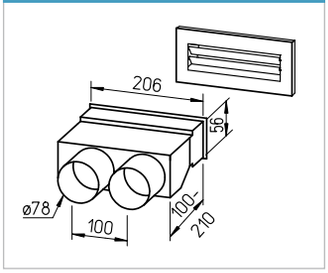


* FRS-WDV 2-75/100

Wall outlet for valve connection		
Type Ø 75 mm	Ref. no.	Ø D mm
FRS-WDV 2-75/100 ○	09621	100
FRS-WDV 2-75/125 ○	09622	125

Wall outlet incl. plaster / formwork lid and cover (1 pc.). For connection of supply air or extract air valves DN 100 or DN 125.

Wall outlet set ○



Wall outlet set, straight	
Type Ø 75 mm	Ref. no.
FRS-WDS 2-75 ○	09994

Wall outlet set consists of:
– Wall outlet with sliding connector
– Wall outlet white (FK-WA 200 W), 250 x 103 mm
– 1 pc. cover

Basic set package ○

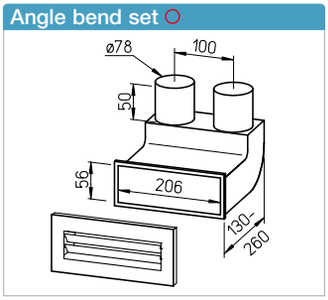
Basic set package		
Type	Ref. no.	Ø D mm
FRS-RP 75 ○	09397	75

flex*pipe* basic set package consists of:

– 3 pcs. FRS-R 75	(Ref. no. 02913)
– 2 pcs. FRS-VK 10-75/160	(Ref. no. 03847)
– 8 pcs. FRS-DWK 2-75/125	(Ref. no. 03857)
– 7 pcs. FRS-B 75	(Ref. no. 02994)
– 7 pcs. FRS-VM 75	(Ref. no. 02914)
– 4 units FRS-DR 75	(Ref. no. 02916)
– 1 units FRS-VD 75	(Ref. no. 02915)
– 1 pcs. cold shrink tape KSB	(Ref. no. 09343)

By choosing the Helios basic set package, you can save
– money due to the discounted package price.
– time, because everything is included to get started right away. There is no need for time consuming, annoying additional trips because little things are missing.

Angle bend set ○



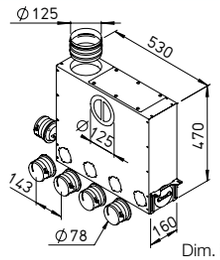
Angle bend set, 90°	
Type Ø 75 mm	Ref. no.
FRS-WBS 2-75 ○	09996

Angle bend set consists of:
– Angle bend with sliding connector
– Wall outlet white (FK-WA 200 W), 250 x 103 mm
– 1 pc. cover

1) Cover with integrated seal FRS-VDS 75, Ref. no. 03855 and -VD 125, Ref. no. 03865. Cover can be used for the connector or duct connection opening on distribution box.

2) Cover with integrated seal FRS-VDS 51, Ref. no. 03856 and -VD 125, Ref. no. 03865. Can also be used as cover for the connector or duct connection opening on distribution box.

Multi-distribution box 4+1x ○



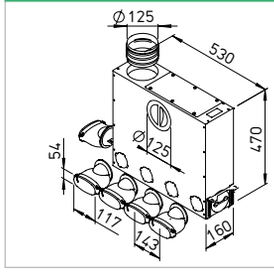
Dim. in mm

Multi-distribution box [1]

Type Ø 75 mm	Ref. no.	Ø NW mm
FRS-MVK 4+1-75/125 ○	03843	125

For universal installation in/on unfinished concrete flooring. With height-adjustable mounting brackets. Duct connection DN 125 optionally horizontal or vertical. 10 connection options for up to 5 ventilation ducts FRS-R 75. With sound-absorbing cladding and large inspection opening.

Multi-distribution box 4+1x ⬭



Multi-distribution box 4+1x [1]

Type 114 x 51 mm	Ref. no.	Ø NW mm
FRS-MVK 4+1-51/125 ⬭	03841	125

For universal installation on unfinished concrete flooring. With height-adjustable mounting brackets. Duct connection DN 125 optionally horizontal or vertical. 10 connection options for up to 5 oval ventilation ducts FRS-R 51. With sound-absorbing cladding and large inspection opening.

Multi-distribution box 5+2x ○

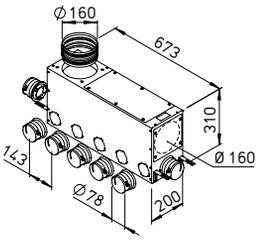


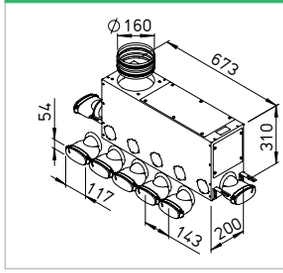
Fig.: FRS-MVK 5+2-75/160

Multi-distribution box 5+2x [1]

Type Ø 75 mm	No.	Ø NW mm
FRS-MVK 5+2-75/160 ○	03836	160
FRS-MVK 5+2-75/160 H ○	03835	160

For universal installation in/on unfinished concrete flooring. With height-adjustable mounting brackets. Duct connection DN 160 optionally horizontal or vertical. Type FRS-MVK 5+2-75/160 H with 380 mm casing height and 3 x duct connection DN 160. 12 connection options for up to 7 ventilation ducts FRS-R 75.

Multi-distribution box 5+2x ⬭

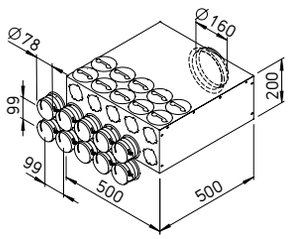


Multi-distribution box 5+2x [1]

Type 114 x 51 mm	Ref. no.	Ø NW mm
FRS-MVK 5+2-51/160 ⬭	03838	160

For universal installation on unfinished concrete flooring or as floor distributor. With height-adjustable mounting brackets. Duct connection DN 160 optionally horizontal or vertical. 12 connection options for up to 7 oval ventilation ducts FRS-R 51. With sound-absorbing cladding and large inspection opening.

Distribution box 10x ○

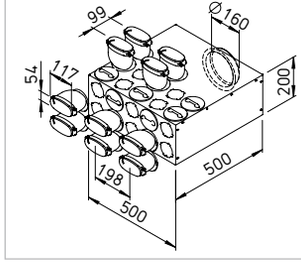


Distribution box 10-75 [2]

Type Ø 75 mm	Ref. no.	Ø NW mm
FRS-VK 10-75/160 ○	03847	160

20 connection options for up to 10 ventilation ducts FRS-R 75. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Distribution box 10x ⬭

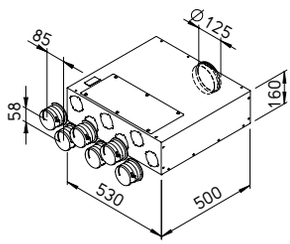


Distribution box 10-51 [2]

Type 114 x 51 mm	Ref. no.	Ø NW mm
FRS-VK 10-51/160 ⬭	03849	160

20 connection options for up to 10 oval ventilation ducts FRS-R 51. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with round connectors possible (Type FRS-ES 75, Ref. no. 03852). With sound-absorbing cladding and large inspection opening.

Flat distribution box 6x ○

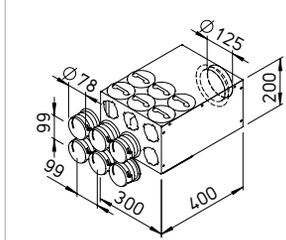


Distribution box 6-75, flat design [1]

Type Ø 75 mm	Ref. no.	Ø NW mm
FRS-FVK 6-75/125 ○	03845	125

For connection of up to 6 ventilation ducts FRS-R 75. Installation as straight distributor. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Distribution box 6x ○

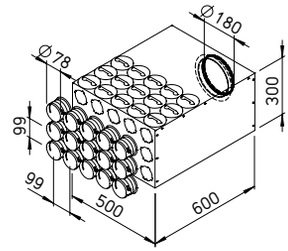


Distribution box 6-75 [1]

Type Ø 75 mm	Ref. no.	Ø NW mm
FRS-VK 6-75/125 ○	03846	125

12 connection options for up to 6 ventilation ducts FRS-R 75. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Distribution box 15x ○



Distribution box 15-75 [2]

Type Ø 75 mm	Ref. no.	Ø NW mm
FRS-VK 15-75/180 ○	03848	180

30 connection options for up to 15 ventilation ducts FRS-R 75. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Combination distribution box ○

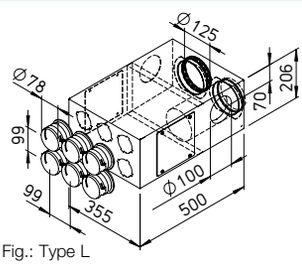


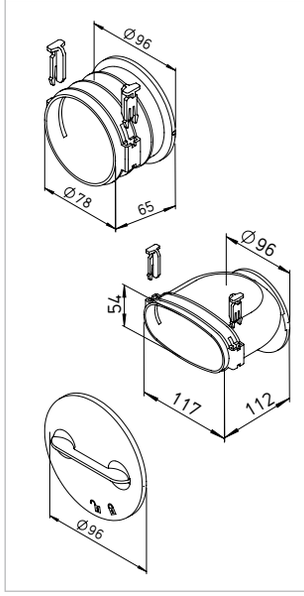
Fig.: Type L

Combination distribution box [1]

Type Ø 75 mm	Ref. no.	Ø NW mm
FRS-KVK 6-75/125 L* ○	03873	125
FRS-KVK 6-75/125 R* ○	03874	125

* Supply air connection on left or right. Compact distribution box, ideal for adjoining extract air rooms. 2 x DN 100 for direct insertion of extract air valves DLV (see accessories). Supply air distribution via connection of up to 6 ventilation ducts FRS-R 75.

Connector, cover ○ ⬭



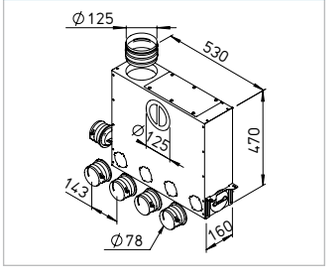
Connector, bayonet cap

Type	Ref. no.	Unit
Connector, Ø 75 mm		
FRS-ES 75 ○	03852	1 pc.
Connector, 114 x 51 mm		
FRS-ES 51 ⬭	03851	1 pc.
Bayonet cap		
FRS-VDB ○ ⬭	03853	1 pc.

Additional connectors for connection of round ventilation duct FRS-R 75 or oval ventilation duct FRS-R 51 to distribution box. Easy and variable positioning using bayonet closure. Tight-closing, includes duct mounting brackets (2 pcs.), made of impact-resistant polypropylene. Bayonet cap for the connector openings on the distribution box.

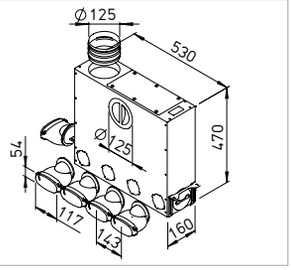
[1] incl. 2 pcs. connector cover.
[2] incl. 4 pcs. connector cover.

Multi-distribution box 4+1x ○



Type Ø 75 mm	No.	Ø NW mm
FRS-MVK 4+1-75/125 ○	03843	125

Multi-distribution box 4+1x ⬭



Type 114 x 51 mm	No.	Ø NW mm
FRS-MVK 4+1-51/125 ⬭	03841	125

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	23.5	30.6
250	24.2	25.3
500	19.3	18.3
1000	28.7	25.3
2000	30.8	39.0
4000	36.6	42.9
8000	38.3	40.8

Multi-distribution box 5+2x ○

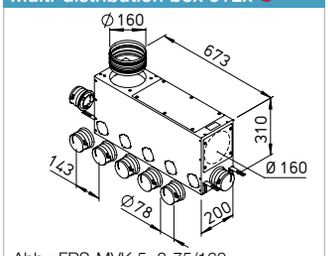
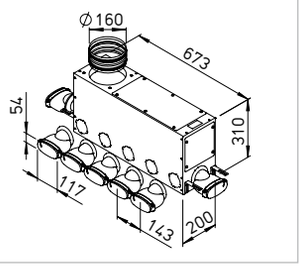


Abb.: FRS-MVK 5+2-75/160

Type Ø 75 mm	No.	Ø NW mm
FRS-MVK 5+2-75/160 ○	03836	160
FRS-MVK 5+2-75/160 H ○	03835	160

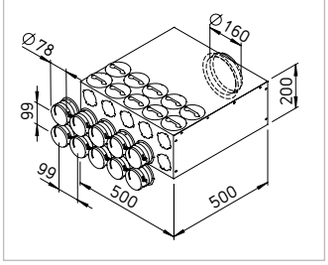
Multi-distribution box 5+2x ⬭



Type 114 x 51 mm	No.	Ø NW mm
FRS-MVK 5+2-51/160 ⬭	03838	160

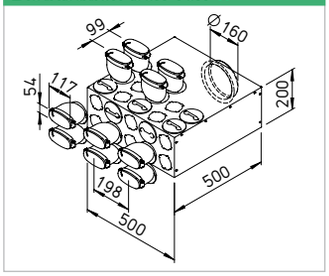
Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	21.0	28.8
250	16.5	24.7
500	24.6	28.0
1000	36.3	34.4
2000	35.2	40.2
4000	43.8	45.0
8000	46.1	41.1

Distribution box 10x ○



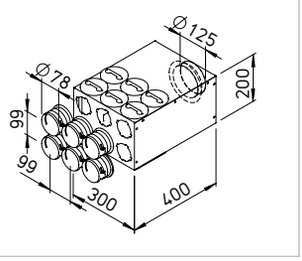
Type Ø 75 mm	No	Ø NW mm
FRS-VK 10-75/160 ○	03847	160

Distribution box 10x ⬭



Type 114 x 51 mm	No.	Ø NW mm
FRS-VK 10-51/160 ⬭	03849	160

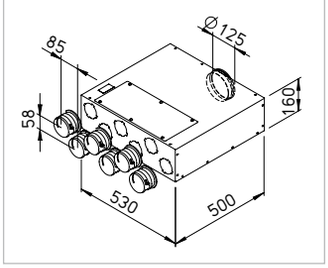
Distribution box 6x ○



Type Ø 75 mm	No.	Ø NW mm
FRS-VK 6-75/125 ○	03846	125

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	23.0	34.4
250	21.8	33.1
500	36.2	27.4
1000	29.4	26.9
2000	28.9	38.7
4000	34.4	44.2
8000	36.1	44.0

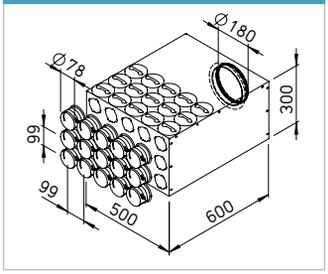
Flat distribution box 6x ○



Type Ø 75 mm	No.	Ø NW mm
FRS-FVK 6-75/125 ○	03845	125

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	22.6	27.4
250	21.3	21.4
500	27.7	20.4
1000	28.8	20.2
2000	30.6	33.6
4000	42.6	40.1
8000	43.2	40.2

Distribution box 15x ○



Type Ø 75 mm	No.	Ø NW mm
FRS-VK 15-75/180 ○	03848	180

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	26.8	30.9
250	19.4	30.2
500	28.4	25.3
1000	25.4	29.0
2000	30.8	39.8
4000	34.7	49.1
8000	34.9	53.0

Measured in accordance with DIN EN ISO 7235 and DIN EN ISO 11820.

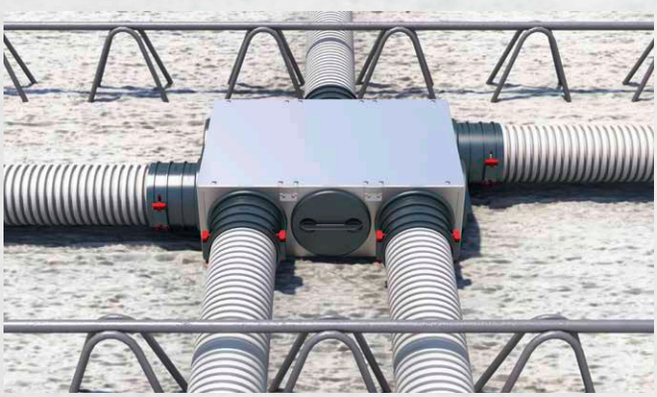
flex*pipe*plus ceiling-integrated distribution element

With the ceiling-integrated distribution element, we are making it even easier for you to realise the perfect KWL ventilation system quickly and easily in the future. The distribution element is not only flexible in application due to its compact dimensions, but it also saves you the complicated duct insertion and removal from the concrete ceiling.

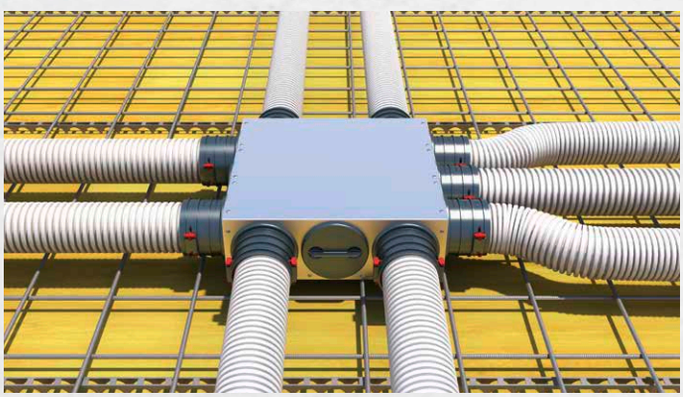
Highlights:

- Intelligent and almost invisible solution for the simple and safe air distribution of **flex*pipe*plus** ducts in concrete ceilings – both in single-family houses and apartment buildings.
- Integrated height adjustment which allows installation in all common filigree ceilings of different thicknesses and in cast-in-situ concrete ceilings.
- The installation without destruction of the formwork and the tool-free duct connection with the click system saves your time and therefore money on the construction site.
- Very good accessibility of the individual ventilation ducts for easy cleaning thanks to the extra-large duct connection (DN 160 mm), which also serves as an inspection opening.
- The distribution element remains closed until the finished installation. The contamination of all air-ducting components is effectively prevented.
- Robust components which can be integrated into the construction process quickly, easily and cost-effectively.

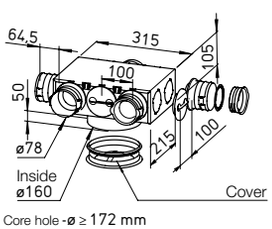
1 Installation in filigree ceiling



2 Installation in raw concrete ceiling



Distribution element 5x



Core hole -ø ≥ 172 mm

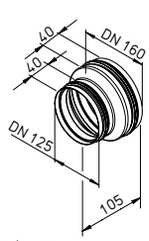
Dimensions in mm

flex*pipe* distribution element 5x

Type Ø 75 mm	Ref. no.	Ø NW mm
FRS-VE 5-75/160	40161	160

For universal installation in the unfinished concrete flooring. Duct connection DN 160 or DN 125 possible (duct connector RVBD 160 L or RVBD 160/125 required for this).
10 connection options for up to 5 FRS-R 75 ventilation ducts. Large inspection opening for easy cleaning incl. cover.

Fitting for duct connection



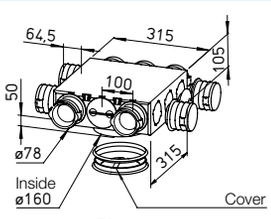
Dimensions in mm

Duct connector

Type Ø 160/125 mm	Ref. no.
RVBD 160/125	40165

Duct connector for the connection of ventilation ducts/IsoPipe ducts DN 125.

Distribution element 9x



Core hole -ø ≥ 172 mm

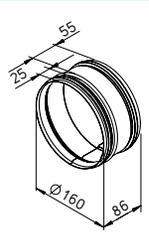
Dimensions in mm

flex*pipe* distribution element 9x

Type Ø 75 mm	Ref. no.	Ø NW mm
FRS-VE 9-75/160	40162	160

For universal installation in the unfinished concrete flooring. Duct connection DN 160 or DN 125 possible (duct connector RVBD 160 L or RVBD 160/125 required for this).
12 connection options for up to 9 FRS-R 75 ventilation ducts. Large inspection opening for easy cleaning incl. cover.

Fitting for duct connection

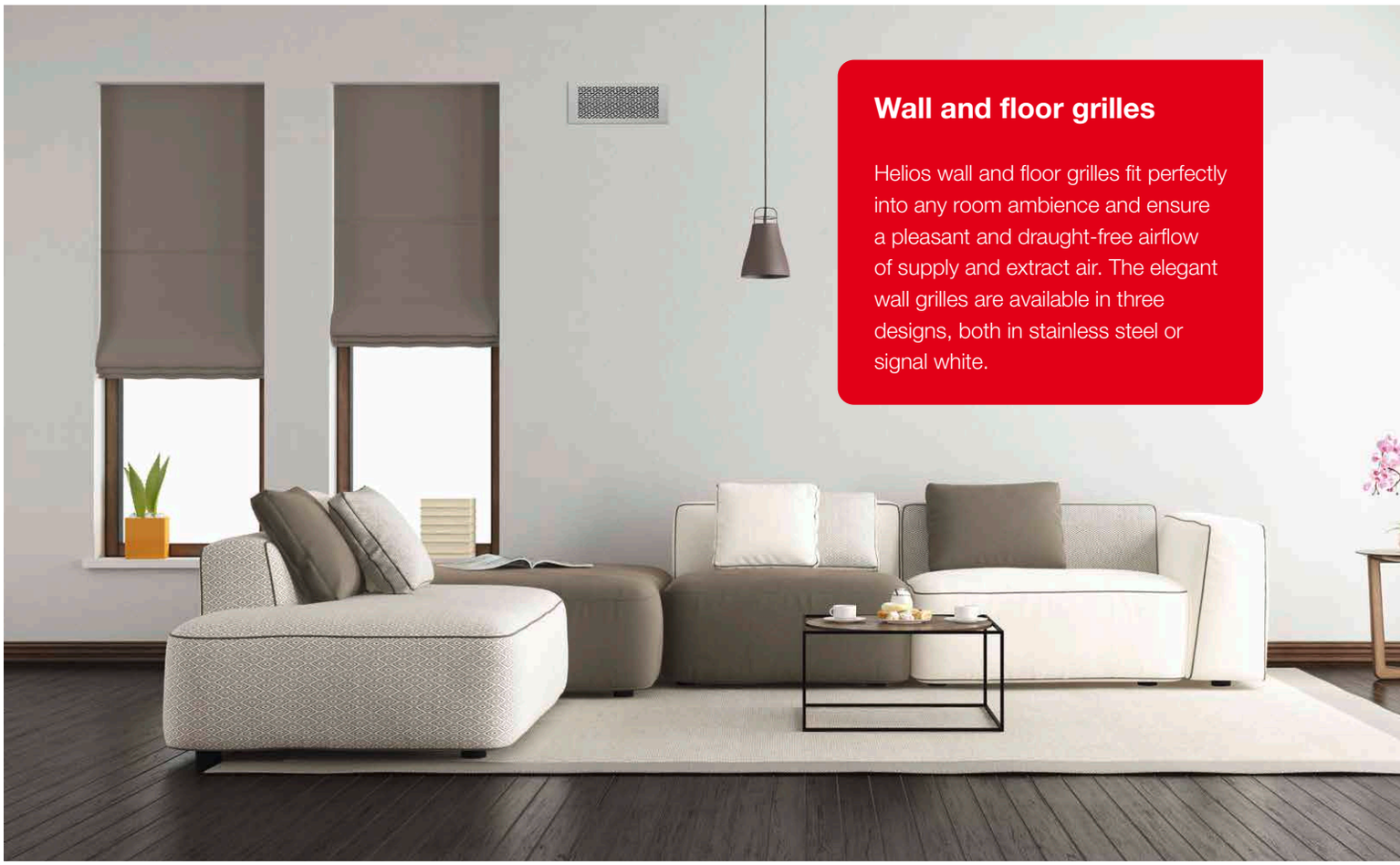


Dimensions in mm

Duct connector long

Type Ø 160 mm	Ref. no.
RVBD 160 L	40164

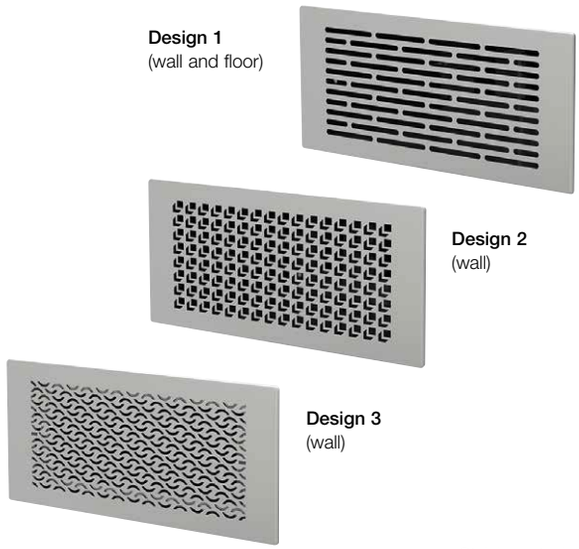
Duct connector for the connection of ventilation ducts/IsoPipe ducts DN 160.



Wall and floor grilles

Helios wall and floor grilles fit perfectly into any room ambience and ensure a pleasant and draught-free airflow of supply and extract air. The elegant wall grilles are available in three designs, both in stainless steel or signal white.

Design grilles for walls and floors



Stainless steel version

The elegant wall grilles in three high-quality designs (stainless steel or signal white coating) blend perfectly into any room atmosphere and guarantee the pleasant draught-free flow of supply air.

- **Description Wall grille set**
  Grille for wall / floor box FRS-WBK 2-51.
  ▢ Set consists of:
  Metal wall grille with installation frame and insert filter.

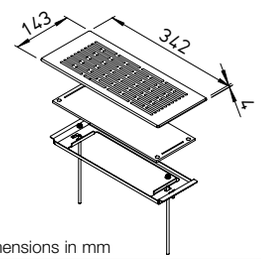
- **Surfaces / Colours**
  ▢ Powder coating in white: FRS-WGS 1, FRS-WGS 2 and FRS-WGS 3.
  ▢ High-quality stainless steel: FRS-WGS 1 E, FRS-WGS 2 E and FRS-WGS 3 E.

Floor grille set for floor level installation. Three-dimensional adjustable compensation mechanism for adapting the grille to different floor covering heights or for alignment to a wall or window.

- **Description Floor grille set**
  Grille for multi-floor box FRS-MBK 2-75 and wall / floor box FRS-WBK 2-51.
  ▢ Set consists of:
  Grille frame, design floor grille and insert filter.

- **Surfaces/ Colours**
  ▢ High-quality stainless steel: FRS-BGS 1.

Wall grille set / Design 1 ⬭



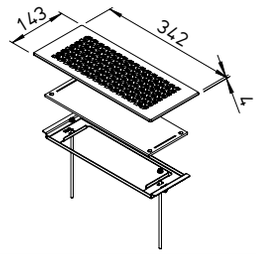
Dimensions in mm

Wall grille set		
Type	Ref. no.	
FRS-WGS 1 ⬭	03881	White
FRS-WGS 1 E ⬭	03886	Stainl. steel

Replacement filter mat for insert filter:
Type ELF-WGS, Ref. no. 03915, unit = 2 pcs.

- **Wall grille set FRS-WGS 1 E**
  with additional wall / floor box FRS-WBK 2-51.

Wall grille set / Design 2 ⬭

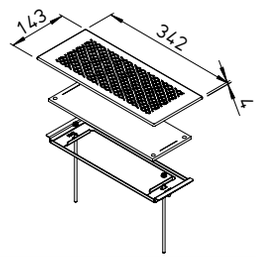


Wall grille set		
Type	Ref. no.	
FRS-WGS 2 ⬭	03882	White
FRS-WGS 2 E ⬭	03892	Stainl. steel

Replacement filter mat for insert filter:
Type ELF-WGS, Ref. no. 03915, unit = 2 pcs.

- **Wall grille set FRS-WGS 2 E**
  with additional wall / floor box FRS-WBK 2-51.

Wall grille set / Design 3 ⬭

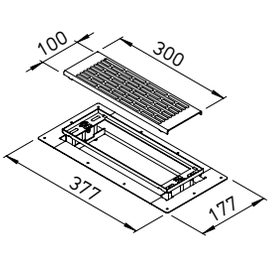


Wall grille set		
Type	Ref. no.	
FRS-WGS 3 ⬭	03883	White
FRS-WGS 3 E ⬭	03904	Stainl. steel

Replacement filter mat for insert filter:
Type ELF-WGS, Ref. no. 03915, unit = 2 pcs.

- **Wall grille set FRS-WGS 3 E**
  with additional wall / floor box FRS-WBK 2-51.

Floor grille set ○ ⬭



Floor grille set		
Type	Ref. no.	
FRS-BGS 1 ○ ⬭	03878	Stainl. steel

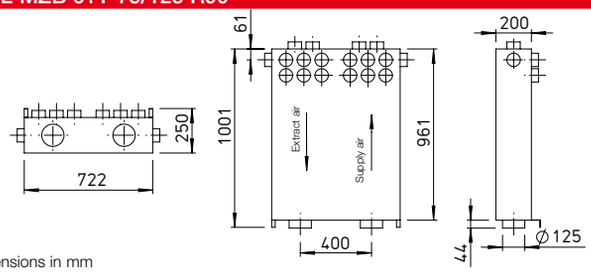
Replacement filter mat for insert filter:
Type ELF-BGS, Ref. no. 03914, unit = 2 pcs.

- **Floor grille set FRS-BGS 1**
  with additional wall / floor box FRS-WBK 2-51.
  Also suitable for multi-floor box FRS-MBK 2-75.

KWL-MZB 6+1-75/125 R90 and KWL-MZB 6+1-75/125 L90

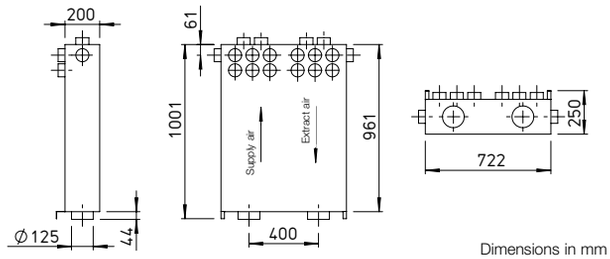
Compact unit for connection of supply and extract air DN 125 and 2 x 7 connectors DN 75 with supply air on right or left side.

KWL-MZB 6+1-75/125 R90



Dimensions in mm

KWL-MZB 6+1-75/125 L90



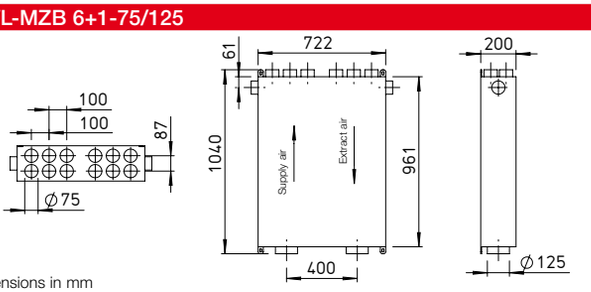
Dimensions in mm

KWL-MZB 6+1-75/125 and KWL-MZB 125/125

Compact unit for the connection of supply and extract air DN 125 and 2 x 7 connectors DN 75.

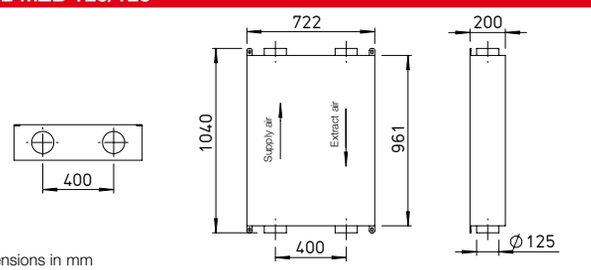
Box with one connection each for supply and extract air on each side DN 125.

KWL-MZB 6+1-75/125



Dimensions in mm

KWL-MZB 125/125



Dimensions in mm

Volume flow control, sound insulation, air distribution and system control – solve seven problems at once with the new KWL MultiZoneBox.
When combined with a central building KWL unit, the MultiZoneBox ensures the silent, demand-oriented supply and extract ventilation of residential and commercial units.

Advantages

- The installation and commissioning are particularly simple and safe.
- Spiral ducts can also be connected just as easily as the flexible plastic duct system **flex***pipe*plus.
- Reliable air distribution for almost all areas of application.
- Practical advantages include freedom from maintenance, maximum functional reliability and whisper-quiet operation.
- When multiple KWL MultiZoneBoxes are used to ventilate a large unit, e.g. a doctor's surgery, different zones can be supplied with varying air volumes independently and according to demand.
- Whether the ventilation system is installed in the basement or on the roof, indoors or outdoors.
- The KWL MultiZoneBox always ensures an ideal air distribution.

Special features

- Large sound insulation elements guarantee silent operation.
- The optional room air sensor makes the MultiZoneBox a complete demand-controlled ventilation unit.
- Only one single, compact box is installed.
- Expendable parts and wear parts were dispensed with completely in the design of the KWL MultiZoneBox.
- Revolutionary technology safely guarantees the predefined volume flow.

Functional principle

Thanks to the intuitive PC software, the commissioning of the KWL MultiZoneBox is convenient and fast:

- Start software > enter air volumes > done!

There is no need for elaborate, time-consuming pressure differential measurements.

- A variety of other configuration options are available, if required.
- Once set, the defined parameters can be stored on a computer and transferred to other boxes.

The box in the network

All boxes can be combined to form a network and operated centrally (using a central controller, KWL-ZR, accessories):
The KWL MultiZoneBox software allows the central commissioning of all boxes in the network. Optionally on-site or via the internet.

The ultimate solution

This technology is used to constantly coordinate the performance of the central ventilation unit with the changing conditions for each KWL MultiZoneBox. The unit supplies the exact air volume individually required for every moment. This reduces energy consumption without comprising on comfort.

Control element Touch
KWL-MZB-BET Ref. no. 04214

Description
- Touch display made of glass for controlling the boxes.
- Dimensions (WxHxD) 110x93x19 mm.
- 3.9 inch display including temperature sensor, flush-mounted version.

KWL-MZB-BET

Control element ECO
KWL-MZB-BE Ref. no. 04213

Description
- Manual 4-step operation or automatic mode. For flush-mounted installation.
- Dimensions (WxHxD) 80x80x10 mm.
- 4-step with LED, flush-mounted version.

KWL-MZB-BE

Pipe support
KWL-MZB-RH13 Ref. no. 04249

Description
- Pipe supports for one-sided connection of **flex***pipe*plus.
- Consists of 1 connection plate with 13 supports.

KWL-MZB-RH13

Pipe support
KWL-MZB-RH7 Ref. no. 04236

Description
- Pipe supports for two-sided connection of **flex***pipe*plus.
- Set consists of 2 connection plates each with 7 supports.

KWL-MZB-RH7

Connection set
KWL-MZB-VSAP Ref. no. 04219

Description
- For ceiling installation with connection plate. Set with 12 connectors and mounting bracket.
- Includes 12 connectors for connection plate.

KWL-MZB-VSAP

KWL-MZB-ZR

Central controller
KWL-MZB-ZR Ref. no. 04215

Description
- Central control, configuration and management of all connected boxes.
- Networking of up to 256 boxes.
- Fan optimiser function.
- Suitable switching power supply: KWL 45 SNH, No. 03001.

KWL-MZB-AP

Connection plate
KWL-MZB-AP Ref. no. 04217

Description
- For installation in concrete ceilings.
- – Dimensions (WxHxD) 776x50x255 mm.
- – 2 x 6 connectors DN 75.
- – For direct box connection to the duct system in the ceiling.

KWL-MZB-VOC-F

Combi-sensor
KWL-MZB-VOC-F No. 04216

Description
- Combi-sensor (air humidity and VOC)for installation in MZB.
- VOC-humidity sensor.
- Installation in KWL MultiZone-Box.

KWL-MZB-F

Humidity sensor
KWL-MZB-F Ref. no. 04250

Description
- Air humidity sensor for installation in KWL MultiZoneBox.

KWL-MZB-KSS

Plastic connectors DN 75
KWL-MZB-KSS Ref. no. 04253

Description
- Set consists of 2 pcs., for the optional, side connection of a ventilation duct DN 75 to KWL-MZB 125/125 (Ref. no. 04053), included in delivery for boxes 04050, 04051, 04052.

Technical data MultiZoneBox

Type	Ref. no.	Type	Ref. no.
KWL-MZB 6+1-75/125 R90	04050	**KWL-MZB 6+1-75/125***	04052
KWL-MZB 6+1-75/125 L90	04051	**KWL-MZB 125/125***	04053
Range of application			40–220 m³/h
Measurement accuracy			+/-10 m³/h
Voltage / Frequency			1~, 230 V, 50 Hz
Max. power consumption			6 Watt
Protection category			IP40
Weight			25 kg

* Supply air and extract air flow directions freely selectable.
Individual type details at www.HeliosSelect.de.

Reference
Suitable revision solution for drywall construction on request.

flex*pipe* is embedded directly in concrete or on/under ceilings,
- **Simple planning and quick installation due to star-shaped, flexible continuous installation from the roll.**
- **Construction site-compliant handling due to low weight.**
- **Quick commissioning, uniform air distribution.**
- **Easy to clean.**

Available in two sizes and designs

☐ **flex*pipe*** FRS 63
External Ø: 63 mm, internal: 52 mm for vol. flows up to 20 m^3/h.

☐ **flex*pipe*plus**
External Ø: 75 mm, internal: 63 mm for vol. flows up to 30 m^3/h. Can be combined with oval duct FRS-R 51 and oval components, see page 152 ff.

Properties and advantages

☐ Special ventilation duct made of hygienically safe PE-HD new material, odourless.
☐ The two-layer design (externally corrugated and internally smooth and antistatically treated) guarantees:
- Low flow resistances and high sound insulation.
- Minimal dirt deposits.
- Easy to clean.

Installation

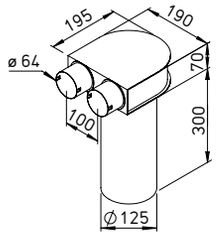
☐ The **flex*pipe*** plastic corrugated pipe has high ring strength (S_{R24} > 8 kN/m^2) and it can be installed directly in, on or under concrete ceilings due to its high flexibility in the desired system.
☐ Airtight and watertight connection simply through the use of FRS seal rings.

flex*pipe* vent. duct round

flex*pipe* vent. duct (bundle = 50 lin. m)

Type Ø 63 mm	Ref. no.	Dim. in mm Ext. Ø	 Int. Ø
FRS-R 63	09327	63	52

Ceiling box



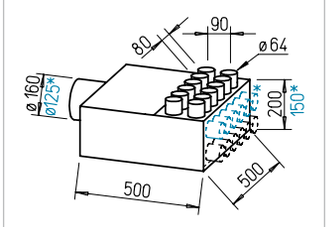
Dimensions in mm

Ceiling box [2] for valve connection DN 125

Type Ø 63 mm	Ref. no.
FRS-DKV 2-63/125	09430

Ceiling box incl. plaster/formwork lid. For connection of supply or extract air valves DN 125 (accessories, see page 170).

Distribution box 6-63, 12-63



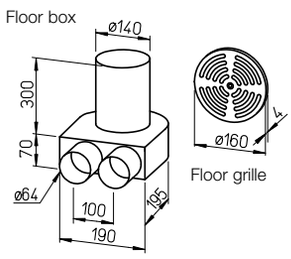
* FRS-VK 6-63/125

Distribution box 6-63, 12-63 [1]

Type Ø 63 mm	Ref. no.	Ø NW mm
FRS-VK 6-63/125	09355	125
FRS-VK 12-63/160	09336	160

For connection of up to 6 or 12 ventilation ducts FRS-R 63, with sound-absorbing cladding. The connector plate can be replaced with the inspection opening and rotated 90° for type 12-63.

Floor box set

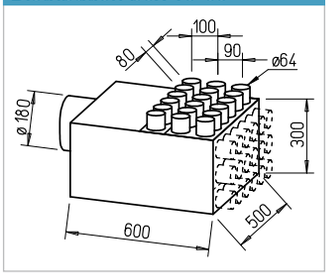


Floor box set [2]

Type Ø 63 mm	Ref. no.
FRS-BKGS 2-63	09991

Floor box set consists of:
- 1 pc. floor box for grille connection DN 160
- 1 pc. floor grille made of brushed stainless steel with adjustable volume flow.

Distribution box 18-63

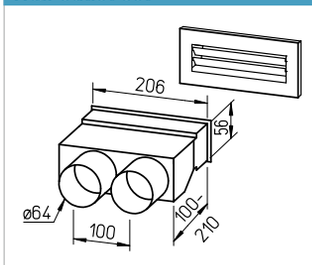


Distribution box 18-63 [1]

Type Ø 63 mm	Ref. no.	Ø NW mm
FRS-VK 18-63/180	09364	180

For connection of up to 18 ventilation ducts FRS-R 63, with sound-absorbing cladding. The connector plate with the connectors can be replaced with the inspection opening and rotated 90°. This allows installation as a straight or 90° distributor.

Wall outlet set

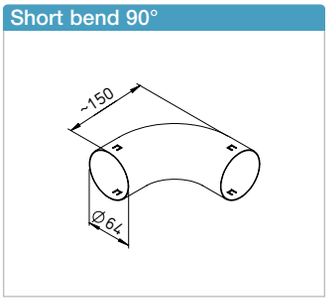


Wall outlet set, straight [2]

Type Ø 63 mm	Ref. no.
FRS-WDS 2-63	09993

Wall outlet set consists of:
- Wall outlet with sliding connector
- Wall outlet white (FK-WA 200 W), 250 x 103 mm

Short bend 90°

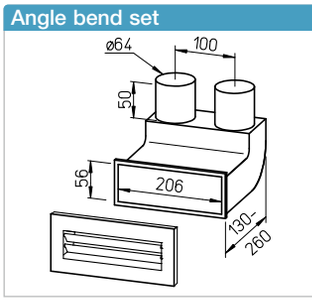


Short bend 90°

Type Ø 63 mm	Ref. no.
FRS-B 63	09348

Short bend 90° for bending radius < 2 x external duct diameter.

Angle bend set

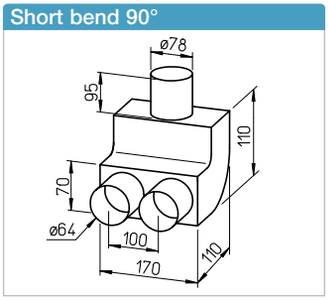


Angle bend set, 90° [2]

Type Ø 63 mm	Ref. no.
FRS-WBS 2-63	09995

Angle bend set consists of:
- Angle bend with sliding connector
- Wall outlet white (FK-WA 200 W), 250 x 103 mm

Short bend 90°

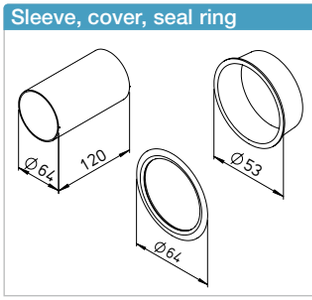


Short bend 90°

Type Ø 63 mm	Ref. no.
FRS-B 75/2-63	09341

Short bend 90° as transition from 1 x 75 mm to 2 hoses with 63 mm.

Sleeve, cover, seal ring



Sleeve, cover, seal ring

Type Ø 63 mm	Ref. no.	Unit
FRS-VM 63 Sleeve	09329	
FRS-VD 63 Cover	09330	10 pcs.
FRS-DR 63 Seal ring	09331	10 pcs.

Note: A seal ring (for IP66) must be used at every connection point (duct / duct, duct / moulded part). Please order corresponding number separately. Coating with lubricant is recommended for installation.

[1] incl. 6 pcs. cover.
[2] incl. 1 pcs. cover.

IsoPipe facade panels


IP-FKB


IP-FBF


IP-FBA

IsoPipe facade panels made of stainless steel for connection to intake air and exhaust air ducts.

Properties

All IsoPipe facade panels are made of high-quality stainless steel.
Also available in coated version (types B) for use in environments with severe air pollution or high salt concentration in the air (near the coast).

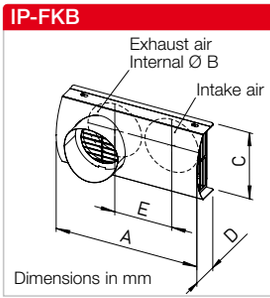
Application and installation

☐ **Facade combination panel IP-FKB**
Designed for the compact installation of IsoPipe intake air and exhaust air ducts with just one facade panel. Universally applicable for horizontal or vertical installation.
Exhaust connectors can be positioned on the right, left or top.

☐ **Exhaust air facade panel IP-FBF**
For the IsoPipe duct system. Horizontal installation position. The exhaust air is discharged directly and horizontally through the duct connectors.

☐ **Intake air facade panel IP-FBA**
For the IsoPipe duct system. Horizontal installation position. The intake air is taken in through the side on both sides.

IP-FKB

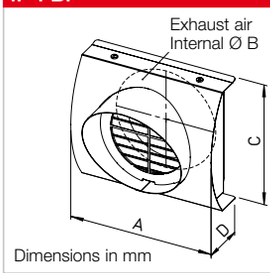


Dimensions in mm

IsoPipe Ø 125 mm		IsoPipe Ø 160 mm		IsoPipe Ø 180 mm	
Type	Ref. no.	**Type**	Ref. no.	**Type**	Ref. no.
Facade combination panel – Stainless steel					
IP-FKB 125	02689	**IP-FKB 160**	02694	**IP-FKB 180**	02695
Dim. in mm	A ØB C D E	Dim. in mm	A ØB C D E	Dim. in mm	A ØB C D E
	420 157 200 100 170		480 192 240 118 210		520 212 290 150 230
Facade combination panel – Stainless steel with additional coating					
IP-FKB 125 B	02661	**IP-FKB 160 B**	02662	**IP-FKB 180 B**	02663
Dim. in mm	A ØB C D E	Dim. in mm	A ØB C D E	Dim. in mm	A ØB C D E
	420 157 200 100 170		480 192 240 118 210		520 212 290 150 230

Exhaust air outlet on the right, left or top.

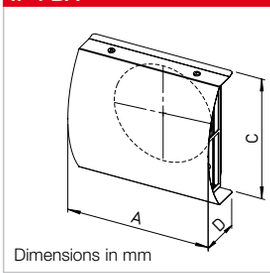
IP-FBF



Dimensions in mm

IsoPipe Ø 125 mm		IsoPipe Ø 160 mm		IsoPipe Ø 180 mm	
Type	Ref. no.	**Type**	Ref. no.	**Type**	Ref. no.
Facade panel – Stainl. steel, for exh. air					
IP-FBF 125	03126	**IP-FBF 160**	03128	**IP-FBF 180**	03131
Dim. in mm	A ØB C D	Dim. in mm	A ØB C D	Dim. in mm	A ØB C D
	230 157 200 78		265 192 240 97		285 212 260 126
Facade panel – Stainl. steel, for exh. air with additional coating					
IP-FBF 125 B	02901	**IP-FBF 160 B**	02902	**IP-FBF 180 B**	02903
Dim. in mm	A ØB C D	Dim. in mm	A ØB C D	Dim. in mm	A ØB C D
	230 157 200 78		265 192 240 97		285 212 260 126

IP-FBA



Dimensions in mm

IsoPipe Ø 125 mm		IsoPipe Ø 160 mm		IsoPipe Ø 180 mm	
Type	Ref. no.	**Type**	Ref. no.	**Type**	Ref. no.
Facade panel – Stainl. steel, for intake air					
IP-FBA 125	03125	**IP-FBA 160**	03127	**IP-FBA 180**	03130
Dim. in mm	A B C	Dim. in mm	A B C	Dim. in mm	A B C
	230 200 78		265 240 97		285 260 126
Facade panel – Stainl. steel, for intake air with additional coating					
IP-FBA 125 B	02664	**IP-FBA 160 B**	02665	**IP-FBA 180 B**	02666
Dim. in mm	A B C	Dim. in mm	A B C	Dim. in mm	A B C
	230 200 78		265 240 97		285 260 126

Installation

☐ Types IP-FKB are universally applicable for horizontal or vertical installation. Exhaust air outlet on the right, left or top.
The adjacent figure shows horizontal installation in an external wall.

☐ Types IP-FBF and IP-FBA for horizontal installation.

Insulated duct system IsoPipe

The innovative alternative to spiral duct installation with subsequent thermal insulation.

– The insulated round duct system IsoPipe
– prevents condensation,
– has a smooth, sound-absorbing inner surface and is easy to clean,
– saves an enormous amount of installation time,
– is the ideal solution for intake air and exhaust air ducting.

Installation

- All IsoPipe moulded parts, bends, wall outlets and roof outlets are precisely matched to each other and simply plugged into each other.
  IsoPipe is quick to install: Compared to the use of insulated spiral duct, the result is work time savings of up to 70 %.

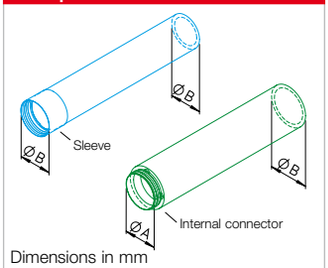
Properties

All pipe parts are fully insulated and consist of vapour-tight, antistatic EPE. Flame retardant according to fire class B1. Air flow temperature from –25 to +80 °C. λ = 0.04 W/mK, d = 16 mm.

Duct concept and installation

- IsoPipe is especially suitable for intake air and exhaust air ducting or supply air and extract air ducting in the basement or low-temperature zone of a KWL system.
- Can be used for volume flows up to 500 m^3/h.
- IsoPipe is shock-proof, particularly lightweight and it can easily be shortened to the desired length with a knife.

IsoPipe duct

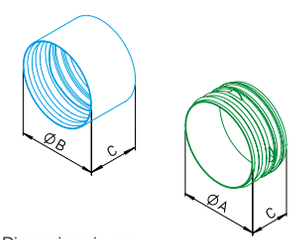


Dimensions in mm

IsoPipe Ø 125 mm				IsoPipe Ø 160 mm				IsoPipe Ø 180 mm				IsoPipe Ø 200 mm			
Type	Ref. no.	ØA	ØB	**Type**	Ref. no.	ØA	ØB	**Type**	Ref. no.	ØA	ØB	**Type**	Ref. no.	ØA	ØB
Duct with sleeve															
IP 125/2000 [1]	09406	—	157	—	—	—	—	—	—	—	—	—	—	—	—
Duct with internal connector															
—			—	**IP 160/2000** [2]	09447	160	192	**IP 180/2000** [3]	09448	180	212	**IP 200/2000** [4]	03810	200	232

[1] Unit = 8 x 2 m
[2] Unit = 6 x 2 m
[3] Unit = 4 x 2 m
[4] Unit = 3 x 2 m

Sleeve / Internal connector

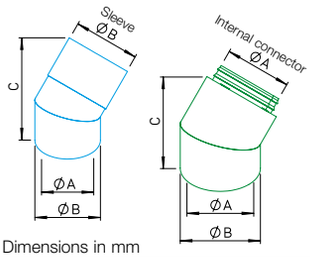


Dimensions in mm

IsoPipe Ø 125 mm					IsoPipe Ø 160 mm				IsoPipe Ø 180 mm				IsoPipe Ø 200 mm			
Type	Ref. no.	ØA	ØB	C	**Type**	Ref. no.	ØA	ØB	C	**Type**	Ref. no.	ØA	ØB	C	**Type**	Ref. no.	ØA	ØB	C
Connecting sleeve																			
IP-MU 125	09394	—	157	104	—	—			—	—				—	—				—
Internal connector																			
—				—	**IP-IV 160**	09453	160	—	80	**IP-IV 180**	09454	180	—	80	**IP-IV 200**	03811	200	—	80

Made of plastic.

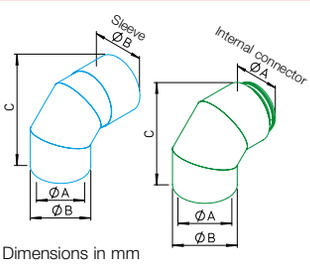
Bend 45°



Dimensions in mm

IsoPipe Ø 125 mm					IsoPipe Ø 160 mm				IsoPipe Ø 180 mm				IsoPipe Ø 200 mm			
Type	Ref. no.	ØA	ØB	C	**Type**	Ref. no.	ØA	ØB	C	**Type**	Ref. no.	ØA	ØB	C	**Type**	Ref. no.	ØA	ØB	C
Bend 45° with sleeve																			
IP-B 125/45	09399	125	157	255	—	—			—	—				—	—				—
Bend 45° with int. connector																			
—				—	**IP-B 160/45**	09449	160	192	242	**IP-B 180/45**	09450	180	212	256	**IP-B 200/45**	03809	200	232	270

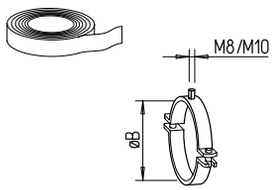
Bend 90°



Dimensions in mm

IsoPipe Ø 125 mm					IsoPipe Ø 160 mm				IsoPipe Ø 180 mm				IsoPipe Ø 200 mm			
Type	Ref. no.	ØA	ØB	C	**Type**	Ref. no.	ØA	ØB	C	**Type**	Ref. no.	ØA	ØB	C	**Type**	Ref. no.	ØA	ØB	C
Bend 90° with sleeve																			
IP-B 125/90	09398	125	157	239	—	—			—	—				—	—				—
Bend 90° with int. connector																			
—				—	**IP-B 160/90**	09451	160	192	272	**IP-B 180/90**	09452	180	212	292	**IP-B 200/90**	03808	200	232	312

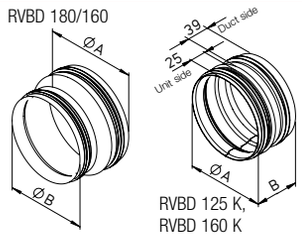
Tape / Pipe clamp



Dimensions in mm

IsoPipe Ø 125 mm			IsoPipe Ø 160 mm			IsoPipe Ø 180 mm			IsoPipe Ø 200 mm		
Type	Ref. no.	ØB	**Type**	Ref. no.	ØB	**Type**	Ref. no.	ØB	**Type**	Ref. no.	ØB
Tape, insulated, 50x3 mm, 15 lin. m											
IP-KLB	09643		**IP-KLB**	09643		**IP-KLB**	09643		**IP-KLB**	09643	
Pipe clamp											
IP-S 125	09395	157	**IP-S 160**	09392	192	**IP-S 180**	09421	212	**IP-S 200**	03812	232

Fittings for unit connection

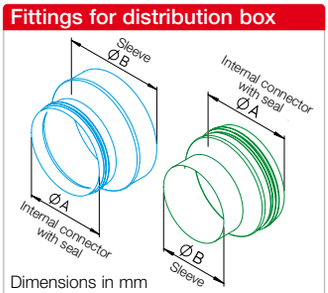


Dimensions in mm

IsoPipe Ø 125 mm				IsoPipe Ø 160 mm				IsoPipe Ø 180 mm				IsoPipe Ø 200 mm			
Type	Ref. no.	ØA	B	**Type**	Ref. no.	ØA	B	**Type**	Ref. no.	ØA	B	**Type**	Ref. no.	ØA	B
Connector with seal for connection to KWL units – with sleeve DN 125															
RVBD 125 K [1]	03414	125	70	—	—	—		—	—	—		—	—	—	
Connector with seal for connection to KWL units – with sleeve DN 160															
—	—	—		**RVBD 160 K** [2]	03415	160	70	**RVBD 180/160** [2]	09589	180	160	—	—	—	
Connector with seal for															
—	—	—		—	—	—		—	—	—		**RVBD 200 K**	03813	200	70

All fittings made of galvanised steel sheet.
[1] Compatible with KWL EC 170 W, KWL EC 200 W, KWL EC 300 W and KWL EC 220 D.
[2] Compatible with KWL EC 500 W and KWL EC 340 D.

Fittings for distribution box

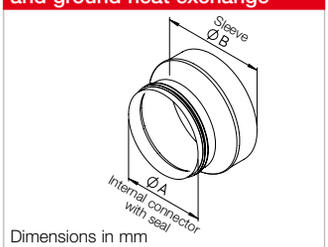


Dimensions in mm

IsoPipe Ø 125 mm				IsoPipe Ø 160 mm				IsoPipe Ø 180 mm				IsoPipe Ø 200 mm			
Type	Ref. no.	ØA	ØB	**Type**	Ref. no.	ØA	ØB	**Type**	Ref. no.	ØA	ØB	**Type**	Ref. no.	ØA	ØB
Fitting for connection to distribution boxes – with connector DN 125															
Direct duct connection				**IP-ARZ 125/160**	09458	160	125	—	—	—		—	—	—	
Fitting for connection to distribution boxes – with connector DN 160															
IP-ARZ 160/125	09358	125	160	Direct duct connection				**IP-ARZ 160/180**	09459	180	160	**IP-ARZ 160/200**	03816	200	160
Fitting for connection to distribution boxes – with connector DN 180															
IP-ARZ 180/125	09360	125	180	**IP-ARZ 180/160**	09455	160	180	Direct duct connection				**IP-ARZ 180/200**	03814	200	180

All fittings made of galvanised steel sheet.

Fittings for KWL HygroBox and ground heat exchange

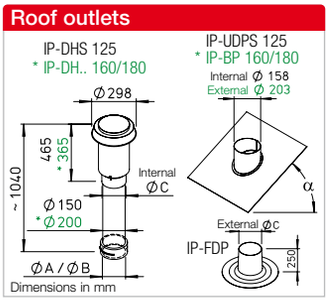


Dimensions in mm

IsoPipe Ø 125 mm				IsoPipe Ø 160 mm				IsoPipe Ø 180 mm				IsoPipe Ø 200 mm			
Type	Ref. no.	ØA	ØB	**Type**	Ref. no.	ØA	ØB	**Type**	Ref. no.	ØA	ØB	**Type**	Ref. no.	ØA	ØB
Fitting for connection to KWL HygroBox – KWL HB 250, connec. DN 160															
IP-ARZ 160/125	09358	125	160	Direct duct connection				—	—	—		**IP-ARZ160/200**	03816	200	160
Fitting for connection to KWL HygroBox – KWL HB 500, connec. DN 250															
—	—	—		**IP-ARZ 250/160**	09590	160	250	**IP-ARZ 250/180**	09591	180	250	**IP-ARZ 250/200**	03815	200	250
Fitting for connection to ground heat exchanger – LEWT, connector DN 200															
IP-ARZ 200/125	09359	125	200	**IP-ARZ 200/160**	09456	160	200	**IP-ARZ 200/180**	09457	180	200	Direct duct connection			
Fitting for connection to ground heat exchanger – SEWT, connector DN 180															
IP-ARZ 180/125	09360	125	180	**IP-ARZ 180/160**	09455	160	180	Direct duct connection				**IP-ARZ 180/200**	03814	200	180

All fittings made of galvanised steel sheet.

Roof outlets



Dimensions in mm

IsoPipe Ø 125 mm				IsoPipe Ø 160 mm				IsoPipe Ø 180 mm			
Type	Ref. no.	ØB	ØC	**Type**	Ref. no.	ØB	ØC	**Type**	Ref. no.	ØA	ØC
Roof outlet, consisting of hood and pan tile* **– Roof hood** black											
IP-DHS 125	03541	157	160	**IP-DHS 160**	03542	192	250	**IP-DHS 180**	03542	180	210
Roof outlet, consisting of hood and pan tile* **– Roof hood including duct** red											
—		—		**IP-DHR 160**	03543	192	250	**IP-DHR 180**	03543	180	210
Roof outlet, consisting of hood and pan tile* **– Roof pan tile for pitched roofs,** with lead edge											
IP-UDPS 125	03546	α 25°– 45°		**IP-BP 160/25**	09384	α 20°– 30°		**IP-BP 180/25**	09384	α 20°– 30°	
—		—		**IP-BP 160/35**	09385	α 30°– 40°		**IP-BP 180/35**	09385	α 30°– 40°	
—		—		**IP-BP 160/45**	09386	α 40°– 50°		**IP-BP 180/45**	09386	α 40°– 50°	
Roof outlet, consisting of hood and pan tile* **– Roof pan tile for flat roof**											
IP-FDP 125	03544	—	158	**IP-FDP 160**	03545	—	203	**IP-FDP 180**	03545	—	203

* Please order roof hoods and pan tiles separately.

Silencer

IsoPipe Ø 125 mm		IsoPipe Ø 160 mm		IsoPipe Ø 180 mm	
Type	Ref. no.	**Type**	Ref. no.	**Type**	Ref. no.
Flexible duct silencer, made of aluminium duct, Length approx. 1 m, elastic					
SDE 125	00789	**SDE 160**	00790	**SDE 180**	00499

Type	Insulation	Insertion loss dB at Hz						
	mm	125	250	500	1000	2000	4000	8000
SDE 125	50	32	42	45	46	50	42	41
SDE 160	50	23	40	43	46	46	31	29
SDE 180	50	20	39	43	47	46	28	29

Air distribution system reno*pipe*

The smart solution, specifically developed for energy-saving renovation: reno*pipe* combines ducting and ventilation duct cladding in one component.
- **Quick, easy installation, even in occupied buildings.**
- **Installation without rework possible in drywall construction.**
- **Minimisation of material usage and costs.**
- **Cost-effective due to few components and elimination of exhaust air piping.**

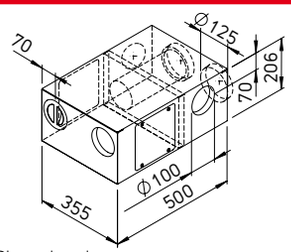
Installation
- The RP moulded parts can be easily shortened to the desired length with a fine-toothed saw.
- Visible installation in ceilings or walls by clicking the long connector into the mounting brackets included in the delivery.
- Free cuts in the duct compensate for unevenness, miter cuts are unnecessary due to precision-fit moulded parts. Fastening elements with longitudinal, lateral and height compensation guarantee a precise fit.

Properties and advantages
- Coatable components made of smooth, high-density EPS in white.
- Quick visible installation, without elaborate ceiling suspensions and drywall construction work.

Duct concept, installation
- The extract air from the adjoining extract air rooms is collected directly in the sound-insulated combination distributor. There is no extract air piping or separate silencers.
- Asymmetric lip seals ensure the leak tightness of the entire reno*pipe* system.

Combination distribution box, supply air right
Compact distributor made of galvanised steel sheet with sound-absorbing lining of inner sides. Properties: Extract air collector, supply air distributor with sound insulation function. Unit connection 2 x DN 125, 2 x DN 100 for extract air, 2 x DN 100 for supply air. Incl. inspection opening and cover.
RP-KVK 3-100/125 R No. 03048

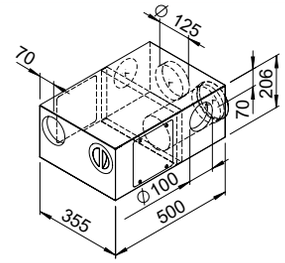
Combination distributor



Dimensions in mm

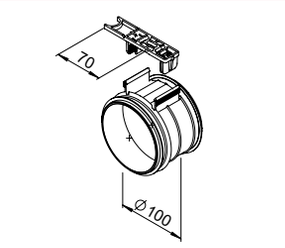
Combination distribution box, supply air left
Compact distributor made of galvanised steel sheet with sound-absorbing lining of inner sides. Properties: Extract air collector, supply air distributor with sound insulation function. Unit connection 2 x DN 125, 2 x DN 100 for extract air, 2 x DN 100 for supply air. Incl. inspection opening and cover.
RP-KVK 3-100/125 L No. 03038

Combination distributor



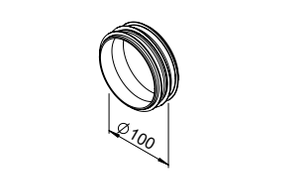
Long connector set
Consists of a connecting sleeve DN 100 made of impact-resistant polypropylene and two lip seals for airtight connection of the duct. Includes mounting bracket for simple click installation of the duct.
RP-LV Ref. no. 03029

Long connector set

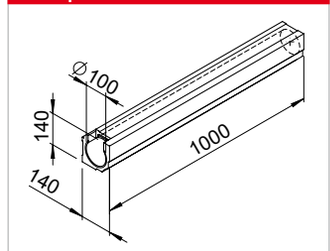


Long connector set
Consists of a connecting sleeve DN 100 made of impact-resistant polypropylene and two lip seals for airtight connection of the duct. Includes mounting bracket for simple click installation of the duct.
RP-KV Ref. no. 03030

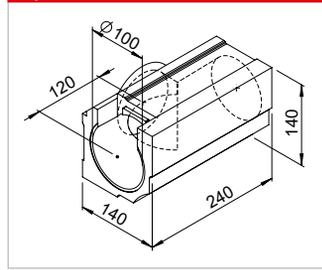
Short connector



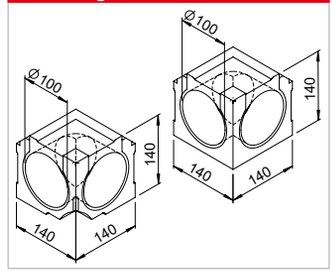
Duct piece



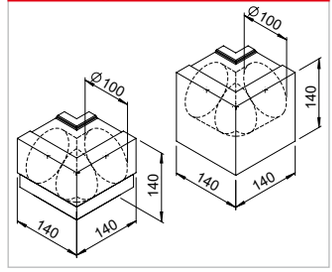
T-piece



Inner angle



Outer angle



* Delivered in packaging units.

Duct Unit = 4 pcs.*
Duct with smooth, square profile. Internal diameter DN 100, length 1 m.
RP-K Ref. no. 03061

Duct with stucco profile Unit = 4 pcs.*
Like above but with visually appealing stucco profile.
RP-SK Ref. no. 03065

T-piece Unit = 4 pcs.*
Compact T-piece with smooth, square profile. Internal diameter DN 100/100/100.
RP-T Ref. no. 03062

T-piece with stucco Unit = 4 pcs.*
Like above but with visually appealing stucco profile.
RP-ST Ref. no. 03066

Inner angle Unit = 2 pcs.*
90° inner angle with smooth, square profile. Internal diameter DN 100.
RP-IW Ref. no. 03075

Inner angle with stucco Unit = 2 pcs.*
Like above but with visually appealing stucco profile.
RP-SIW Ref. no. 03077

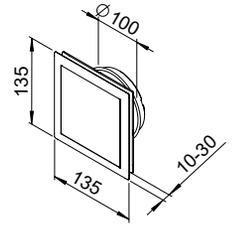
Outer angle Unit = 2 pcs.*
90° outer angle with smooth, square profile. Internal diameter DN 100.
RP-AW Ref. no. 03076

Outer angle with stucco Unit = 2 pcs.*
Like above but with visually appealing stucco profile.
RP-SAW Ref. no. 03078

Design ventilation valve
Design ventilation valve for extract air operation, DN 100, adjustable. With closed front and integrated filter.
DLV 100 Ref. no. 03039

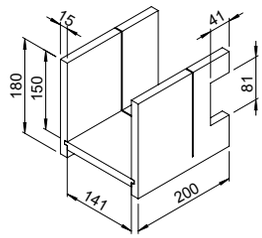
Replacement air filter Unit = 5 pcs.*
ELF-DLV 100 Ref. no. 03042

Ventilation valve



Dimensions in mm

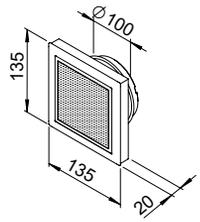
Cutting aid



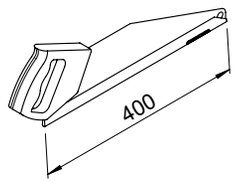
Cutting aid
Stable cutting aid, beech multiplex 15 mm, for easy cutting of duct to length.
RP-SH Ref. no. 03036

Design ventilation valve, for supply air
Design ventilation valve for supply air operation, DN 100.
DLVZ 100 Ref. no. 03040

Ventilation valve



Fine-toothed saw

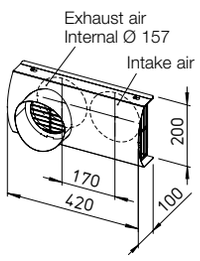


Fine-toothed saw
Special fine-toothed handsaw for precise cuts.
RP-FS Ref. no. 03044

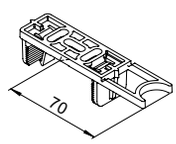
Facade combination panel
For intake air and exhaust air ducts. Universally applicable. Elegant, made of high-quality stainless steel. Connection DN 125.
IP-FKB 125 Ref. no. 02689

With additional coating for use in environments with severe air pollution or high salt concentration in the air.
IP-FKB 125 B Ref. no. 02661

Facade combination panel



Bracket

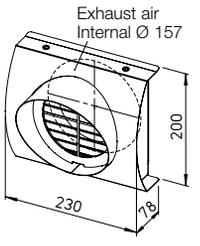


Mounting bracket Unit = 5 pcs.*
Made of high-quality, impact-resistant plastic.
RP-BK Ref. no. 03031

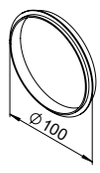
Exhaust air panel
Elegant, made of high-quality stainless steel.
Connection DN 125.
IP-FBF 125 Ref. no. 03126

With additional coating for use in environments with severe air pollution or high salt concentration in the air.
IP-FBF 125 B Ref. no. 02901

Exhaust air panel



Seal

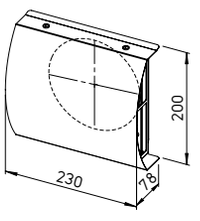


Lip seal Unit = 10 pcs.*
DN 100 made of EPDM.
RP-LD Ref. no. 03033

Intake air panel
Elegant, made of high-quality stainless steel.
Connection DN 125.
IP-FBA 125 Ref. no. 03125

With additional coating for use in environments with severe air pollution or high salt concentration in the air.
IP-FBA 125 B Ref. no. 02664

Intake air panel

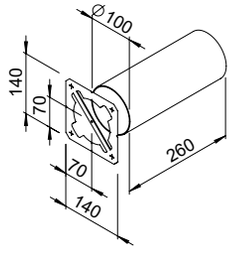


End/inspection cover

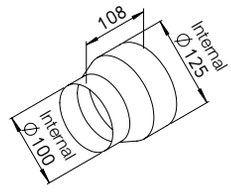
End/inspection cover
DN 100 made of high-quality plastic, with lip seal. For attachment to am duct end piece.
RP-RD Ref. no. 03037

Wall sleeve
DN 100 made of PVC, incl. mounting template for simple wall outlet.
RP-WH Ref. no. 03035

Wall sleeve



Reducer



Reducer
Made of galvanised steel sheet.
RP-RZ 125/100 Ref. no. 03017

* Delivered in packaging units.

Flat duct system FK

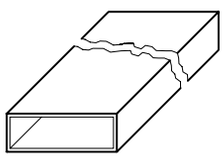
Underfloor duct system made of galvanised steel sheet, specifically developed for domestic ventilation. The optimal solution for concealed air ducts; ideal for air distribution in new buildings.

Properties
- All components made of galvanised steel sheet, corrosion-resistant and non-flammable.

Available in two sizes
- FK 150 x 50 mm
  for volume flows up to 90 m^3/h.
- FK 200 x 50 mm
  for volume flows up to 140 m^3/h.

Duct concept and installation
- Flat design and rigid construction allow easy installation in unfinished flooring.
- Connection using external connector. Moulded parts with integrated sleeve (insertion depth approx. 35 mm). The smooth internal walls result in low flow resistances and do not create obstacles for dirt deposits. Cleaning (disinfection) is still possible.
- The distribution box, which must be installed per floor for extract and supply air delivery, simplifies the duct layout.
- Flat silencers (FK-SD) can be installed in the duct system to protect noise-sensitive rooms, e.g. bedrooms.

Flat duct

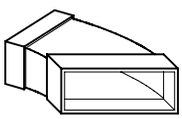


Dimensions in mm

Flat duct

Type	Ref. no.	Dim. in mm Width	Height	Length
150 x 50 m				
FK 150	02905	150	50	1500
200 x 50 mm				
FK 200	02906	200	50	1500

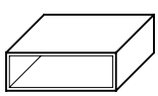
Bend, horizontal 45°



Bend, horizontal 45°

Type	Ref. no.	Dim. in mm Width	Height	Radius
150 x 50 m				
FK-BH 150/45	02910	153	53	45°
200 x 50 mm				
FK-BH 200/45	02912	203	53	45°

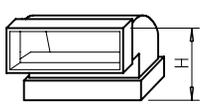
Connector



Connector

Type	Ref. no.	Dim. in mm Width	Height	Length
150 x 50 m				
FK-V 150	02941	153	53	200
200 x 50 mm				
FK-V 200	02942	203	53	200

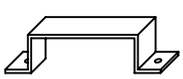
Bend, vertical 90°



Bend, vertical 90°

Type	Ref. no.	Dim. in mm Width	Height	Radius
150 x 50 m				
FK-BV 150/90	02919	153	103	90°
200 x 50 mm				
FK-BV 200/90	02920	203	103	90°

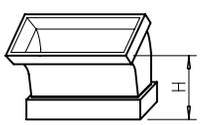
Mounting bracket



Mounting bracket

Type	Ref. no.	Dim. in mm Width	Height	Length
150 x 50 m				
FK-B 150	02907	151	52	30
200 x 50 mm				
FK-B 200	02908	201	52	30

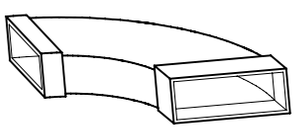
Bend, vertical 45°



Bend, vertical 45°

Type	Ref. no.	Dim. in mm Width	Height	Radius
150 x 50 m				
FK-BV 150/45	02917	153	73	45°
200 x 50 mm				
FK-BV 200/45	02918	203	73	45°

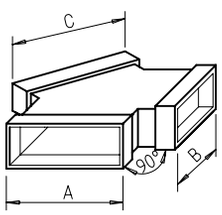
Bend, horizontal 90°



Bend, horizontal 90°

Type	Ref. no.	Dim. in mm Width	Height	Radius
150 x 50 m				
FK-BH 150/90	02909	153	53	90°
200 x 50 mm				
FK-BH 200/90	02911	203	53	90°

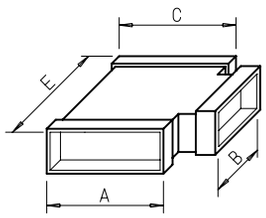
Y-branch



Y-branch

Type	Ref. no.	Dim. in mm A	B	C
150 x 50 m				
FK-Y 150/150/150	02927	153	153	153
200 x 50 mm				
FK-Y 200/150/150	02929	153	153	203

T-piece

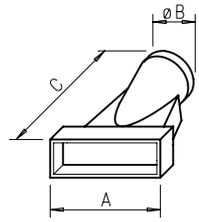


Dimensions in mm

T-piece

Type	Ref. no.	Dim. in mm A	B	C	E
FK-T 150/150/150	02921	153	153	153	250
FK-T 150/150/200	02923	153	153	203	390
FK-T 150/200/150	02926	153	203	153	300
FK-T 200/150/200	02925	203	153	203	250
FK-T 150/200/200	02924	153	203	203	440
FK-T 200/200/200	02922	203	203	203	300

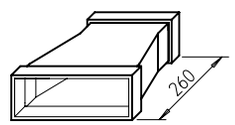
Transition piece



Transition piece

Type	Ref. no.	Dim. in mm A	ØB	C
150 x 50 mm				
FK-Ü 75/150	02948	153	78	260
FK-Ü 100/150	02996	153	103	260
200 x 50 mm				
FK-Ü 100/200	02997	203	103	260
FK-Ü 125/200	02998	203	128	260

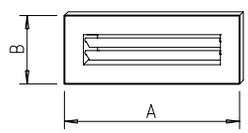
Reducers



Reducers

Type	Ref. no.	Dim. in mm Length	Heigth
Reducer symmetrical			
FK-RS 200/150	02932	260	53
Reducer asymmetrical			
FK-RA 200/150	02933	260	53

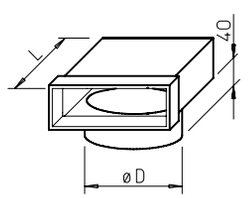
Outlet



Ceiling/wall outlet

Type	Ref. no.	Colour	Dim. in mm A	B
200 x 50 mm				
FK-WA 200 W	09350	White	250	103
FK-WA 200 AL	09351	Alum.	250	103

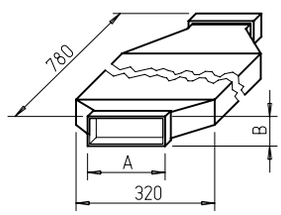
End piece – Spiral duct



End piece with connection for spiral duct

Type	Ref. no.	Dim. in mm Ø D	L
150 x 50 mm			
FK-ER 150/100	02934	99	200
FK-ER 150/125	02935	124	200
200 x 50 mm			
FK-ER 200/160	02936	159	220

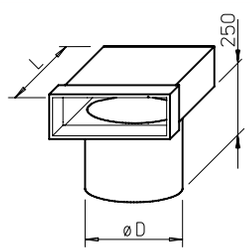
Silencer



Silencer

Type	Ref. no.	Dim. in mm A	B
150 x 50 mm			
FK-SD 150	02945	153	53
200 x 50 mm			
FK-SD 200	02946	203	53

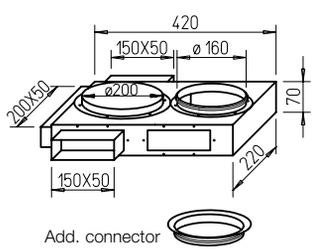
End piece – Valve



End piece with connection for spiral duct

Type	Ref. no.	Dim. in mm Ø D	L
150 x 50 mm			
FK-EV 150/100	02937	102	200
FK-EV 150/125	02938	127	200
200 x 50 mm			
FK-EV 200/100	02939	102	200
FK-EV 200/125	02940	127	200

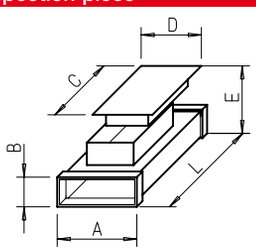
Distribution box



Distribution box

Type	Ref. no.
FK-VK	02987
Delivery FK-VK	
4 connectors 150 x 50 (2 enclosed loose),	
1 connectors 200 x 50 and 1 inspection panel.	
Add. connectors for straight distributor	
FK-ZS	02947

Inspection piece

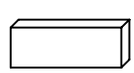


Inspection piece

Type	Ref. no.	Dim. in mm A	B	C	D	L
150 x 50 mm						
FK-RZ 150	02930	153	53	347	137	500
200 x 50 mm						
FK-RZ 200	02931	203	53	347	137	500

Dim. E can vary from 105-130 mm.

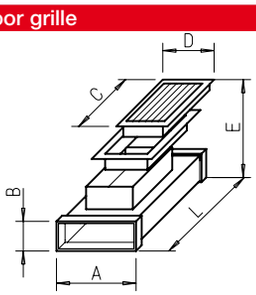
End cover



End cover

Type	Ref. no.
150 x 50 mm	
FK-ED 150	02943
200 x 50 mm	
FK-ED 200	02944

Floor grille

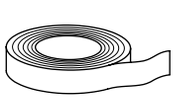


Aluminium floor grille with inst. casing

Type	Ref. no.	Dim. in mm A	B	C	D	L
150 x 50 mm						
FK-BA 150	02986	153	53	348	152	500

Dim. E can vary from 112-152 mm.

Sealing tape



Sealing tape/Tape

Type	Ref. no.	
Cold shrink tape		
KSB	09343	50 mm wide, 15 lin. m
Aluminium cold shrink tape		
KSB ALU	09344	50 mm wide, 15 lin. m
Tape		
KLB	00619	50 mm wide, 20 lin. m

Extract air elements

Design ventilation valves and disc valves

For extract air delivery at high and low flow rates or resistances.
DLV with visually closed front design and integrated filter.

Ø 80		Ø 100		Ø 125		Ø 160	
Type	**Ref. no.**	**Type**	**Ref. no.**	**Type**	**Ref. no.**	**Type**	**Ref. no.**
Design ventilation valve DLV [1] for extract air							
		DLV 100	03039	**DLV 125**	03049		
		ELF-DLV 100 [2]	03042	**ELF-DLV 125 [2]**	03058		
Plastic disc valve KTVA							
KTVA 75/80	00940	**KTVA 100**	00941	**KTVA 125**	00942	**KTVA 160**	00943
Metal disc valve for extract air (for areas where non-flammable components are compulsory)							
MTVA 75/80	08868	**MTVA 100**	08869	**MTVA 125**	08870	**MTVA 160**	08871

[1] With integrated filter. [2] Replacement air filter for DLV, unit = 5 pcs.

Supply air elements

Design ventilation valves and disc valves

For supply air delivery at high and low flow rates or resistances.
DLV 125 with visually closed front design and integrated filter.

Ø 80		Ø 100		Ø 125		Ø 160	
Type	**Ref. no.**	**Type**	**Ref. no.**	**Type**	**Ref. no.**	**Type**	**Ref. no.**
Ventilation grille LGK, Design ventilation valve DLV for supply air							
LGK 80	00259	**DLVZ 100**	03040	**DLV 125**	03049		
				ELF-DLV 125 [1]	03058		
Plastic disc valve KTVZ							
KTVZ 80	02762	**KTVZ 100**	02736	**KTVZ 125**	02737	**KTVZ 160**	02738
Metal disc valve for supply air (for areas where non-flammable components are compulsory)							
MTVZ 75/80	09603	**MTVZ 100**	09604	**MTVZ 125**	09605	**MTVZ 160**	09606

[1] Replacement air filter for DLV 125, unit = 5 pcs.

Supply air-extract air valve ZAV

Supply air-extract air valve ZAV

Elegant plastic valve for wall and ceiling installation.
Can be used as a wall element with open front grille.
Ceiling installation with closed front grille.
Flexible application as supply air valve or extract air valve.

Ø 80		Ø 100		Ø 125		Ø 160	
Type	**Ref. no.**	**Type**	**Ref. no.**	**Type**	**Ref. no.**	**Type**	**Ref. no.**
Plastic valve for supply and extract air ZAV							
ZAV 80	03079			**ZAV 125**	03080		

Attachment filter element VFE

Attachment filter element VFE

For installation in front of disc valves for greasy, contaminated room air. Prevents grease and dirt deposits.
Casing made of galvanised steel sheet, white, plastic powder-coated. Filter made of dimensionally stable aluminium filter fabric with 324 cm² free filter surface and aluminium frame.

VFE 70	Ref. no. 02552
VFE 90	Ref. no. 02553
ELF/VFE	Ref. no. 02554

Replacement air filter, unit = 2 pcs.

Control lines

Control lines

8-pin AWG24 twisted pair cable for the control element for types KWL EC 700 D to KWL EC 2600 S and KWL YOGA from 400 to 1000.

	For control element KWL EC 700 D - 2600 S and KWL YOGA 400 - 1000 (8-pin AWG24 twisted pair cable)	
Cable length	**Type**	**Ref. no.**
20 metres	**ALB EC-SK 20**	06816
40 metres	**ALB EC-SK 40**	06817

Adapter board

Adapter board

Adapter from flat ribbon cable to stranded wire or cable. For connection of KNX module and RJ10 control line. See KWL unit product pages for description of KNX module.

Type KWL-RJ10 KL No. 04277

Other accessories	**Page**
– Enthalpy heat exchanger	103
– Flexible duct system	152
– Insulated duct system	164 f.
– Air distrib. systems	166 ff.
– HygroBox	172 f.
– Ground heat exchang.	174 ff.
– Fire prot. elements	590 ff.

Accessory details

Dimensions, further technical information and other sizes:

Warm water heating elements and temp. control systems	490 ff.
Ventilation grilles, ducts, moulded parts, roof outlets	561 ff.
Extract air elements, attachment filter elements	574 ff.
Disc valves	582 ff.

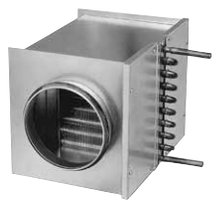
Shutters

Silencer

Ø 100	Ø 125	Ø 160	Ø 200	Ø 250	Ø 315	Ø 355	Ø 400
Flexible connecting sleeve – For acoustic decoupling, incl. 2 pcs. hose clamps							
FM 100 01681	**FM 125** 01682	**FM 160** 01684	**FM 200** 01670	**FM 250** 01672	**FM 315** 01674	**FM 355** 01675	**FM 400** 01676
Duct shutters – Self-actuating or **motorised, installed in pipeline, casing made of galvanised steel sheet or *plastic							
RSKK* 100 05106	**RSKK* 125** 05107	**RSK 160** 05669	**RSK 200** 05074	**RSK 250** 05673	**RSK 315** 05674	**RSK 355** 05650	**RSK 400** 05651
				RVM 250** 02576	**RVM** 315** 02578	**RVM** 355** 02579	**RVM** 400** 02580
KAK 100 04097	**KAK 125** 04098	**KAK 160** 04099	**KAK 200** 04100	**Cold smoke shutter**			
Flexible cross talk silencer FSD [1], **duct silencer RSD** [1] – Galvanised steel sheet				**Duct silencer SDE** see page 165			
FSD 100 00676	**FSD 125** 00677	**FSD 160** 00678	**FSD 200** 00679	**FSD 250** 00680	**FSD 315** 00681	**FSD 355** 00682	**FSD 400** 00683
—	—	—	—	**RSD 250** 08739	**RSD 315** 08745	**RSD 355** 08748	**RSD 400** 08751

[1] See product page for average insulation dimension.

Warm water heating element



		Compatible with duct	Air-side data					Water-side data [1]			Compatible temperature control system	
			Heat output		Δ T air		at V̇	Pressure loss	with water volume	Weight		
Type	Ref. no.	Ø mm	kW [1]	kW [2]	K [1]	K [2]	m³/h	Δp_W kPa	l/h	approx. kg	**Type**	Ref. no.
WHR 100	09479	100	1.9	0.9	35	17	150	1	84	3.2	**WHST 300 T50**	08820
WHR 125	09480	125	2.6	1.1	29	13	250	2	115	3.2	**WHST 300 T50**	08820
WHR 160	09481	160	5.5	3.1	38	22	400	11	245	4.9	**WHST 300 T50**	08820
WHR 200	09482	200	7.2	4.1	33	19	600	17	317	4.9	**WHST 300 T50**	08820
WHR 250	09483	250	10.7	6.0	37	21	800	8	470	6.9	**WHSH HE 24 V**	08318
WHR 315	09484	351	18.3	10.4	36,2	21	1400	9	810	9.0	**WHSH HE 24 V**	08318
WHR 400	09524	400	26.2	15.0	36	21	2000	11	1060	12.5	**WHSH HE 24 V**	08318

Door ventilation grilles

Door ventilation grilles
Unobtrusive, sight screening ventilation grille made of break-resistant plastic for installation in door leaf.

See product page for detailed description.

LTGW Ref. no. 00246
Made of plastic, white.

LTGB Ref. no. 00247
Made of plastic, brown.

Cleaning set

Cleaning set for air distribution systems flex*pipe* and reno*pipe*.
The universal cleaning set KWL-RS is ideally suitable for cleaning the **flex***pipe* duct systems (DN 75, DN 63) and the **reno***pipe* air distribution system (DN 100). Application is possible either by pushing (for short distances) or pulling. In case of longer duct sections or narrow bends, the round nylon brush is simply pulled in the direction of the distribution box, where the 90° bend is used for the intake connection. This is used to easily remove the dust loosened by the round nylon brush with a commercially available vacuum cleaner.

Delivered in a practical transport bag.
Delivery: Per 1 pc.
- Reel with flexible GFK wire (20 linear m.)
- Round brushes DN 63, 75, 100
- 90° bend and seal for intake connection DN 56
- Adapter DN 56/40, DN 56/32.

KWL-RS Ref. no. 02797

Air temperature control

Air temperature control for KWL units with PWW post-heater.
For air heating control of the PWW post-heater integrated in KWL WW types. Consists of thermostat with remote adjustment and remote sensor. Simple, cost-effective and quick-to-install solution.
Temperature range 8 – 38 °C.
WHST 300 T38 Ref. no. 08817

Air temperature control

Air temperature control for warm water heating element WHR. Ideal for use as supply air heater.
Consists of thermostat incl. duct temperature sensor (with 2 m capillary tube) and valve. Provides a constant supply air temperature. Simple, cost-effective and quick-to-install solution.
Temperature range 20 – 50 °C.
WHST 300 T50 Ref. no. 08820

Hydraulic unit

Hydraulic unit
Controls the water temperature of the PWW heating element using a three-way valve actuator 24 V (0-10 V) and thus the heat output transferred to the air. Delivered as a complete unit, incl. VL-/RL temperature display, circulating pump and flexible connection hoses.

WHSH HE 24 V (0-10 V) No. 08318

Weekly timer

Weekly timer
Digital timer with LCD display for autom. control of op. mode, programmable for every weekday. Surface and flush-mounted install.
Dim. mm (WxHxD) 84 x 84 x 40
WSUP Ref. no. 09990

For switch cabinet installation (2 space units required).
Dim. mm ((WxHxD) 36 x 90 x 63
WSUP-S Ref. no. 09577

WHR: The values apply for supply air temp. 0 °C and flow/return temperatures: [1] 90/70 °C, [2] 60/40 °C.

KWL HBX

Designed specifically for ventilation systems in residential buildings and offices, the Helios HygroBox automatically guarantees a healthy feel-good atmosphere with ideal air humidity throughout the year.

Advantages
- Constant indoor climate with ideal moisture content.
- Prevention of expensive damage to furniture, wooden floor coverings and antiques.
- Alleviation of allergy symptoms and health impacts. Strengthening of the immune system by reducing the lifetime of bacteria and viruses.
- Reduction of fine dust and electrostatic charges.

Special HygroBox features
- Constant supply air humidity and temperature in all rooms.
- The principle of natural evaporation prevents excessive humidification.
- Hygienically safe due to UVC disinfection.
- Fully automated operation with automatic summer deactivation.
- Low-maintenance and easy to install.
- Low operating costs through the use of evaporation energy from the existing heating system.

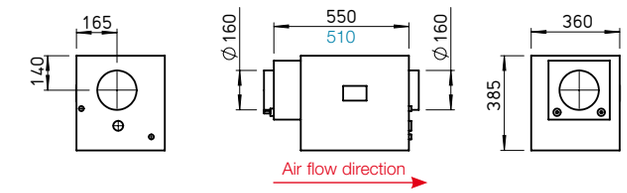
Functional principle
The HygroBox is an active humidification unit for integration in new or existing KWL ventilation units with heat recovery. The fresh intake air flows through the KWL unit heat exchanger and absorbs the thermal energy from the extract air. This preheated air is then delivered to the HygroBox, where active and automatic humidification takes place according to the principle of natural evaporation. A bladed rotor rotates continuously in a water bath inside the unit and releases water molecules into the preheated supply air via the wetted blade surface. Regardless of the KWL unit operating level and external weather influences, the HygroBox constantly maintains the preselected relative air humidity and thus guarantees a healthy feel-good atmosphere with ideal moisture content.

Delivery
Delivered as a plug-in compact unit including water supply hoses and water filter.

Heating element
- The HygroBox is equipped with a warm water (WW types) or electric heating element (EH types). This heats the supply air before humidification and thereby guarantees the required evaporation energy and pleasant supply air temperature.
- With regard to heating systems with low flow temperature (e.g. heat pumps), a low-temperature heating element (type KWL-NHR, accessories, see right page) must be connected downstream of the HygroBox.

Summer operation
- The HydroBox automatically switches to standby mode when the moisture content of the intake air is sufficiently high (e.g. in summer). In this state, there is no water in the unit and the remains at a standstill.

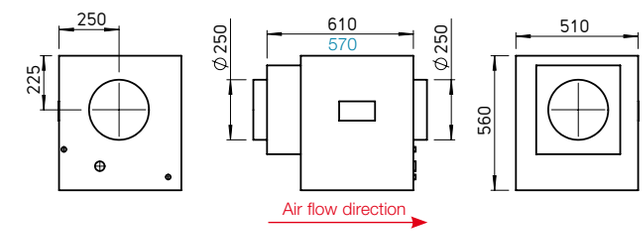
Dimensions KWL HBX 250.. L



Dimensions in mm

KWL HBX 250 WW L, KWL HBX 250 EH L

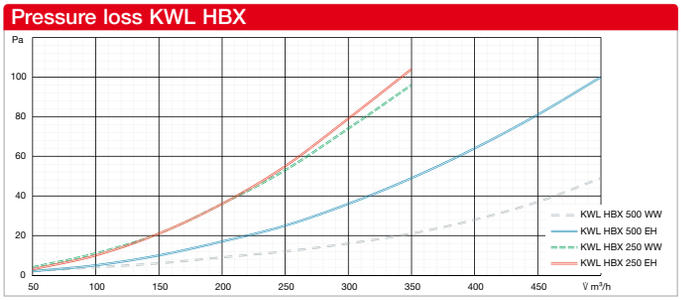
Dimensions KWL HBX 500.. L



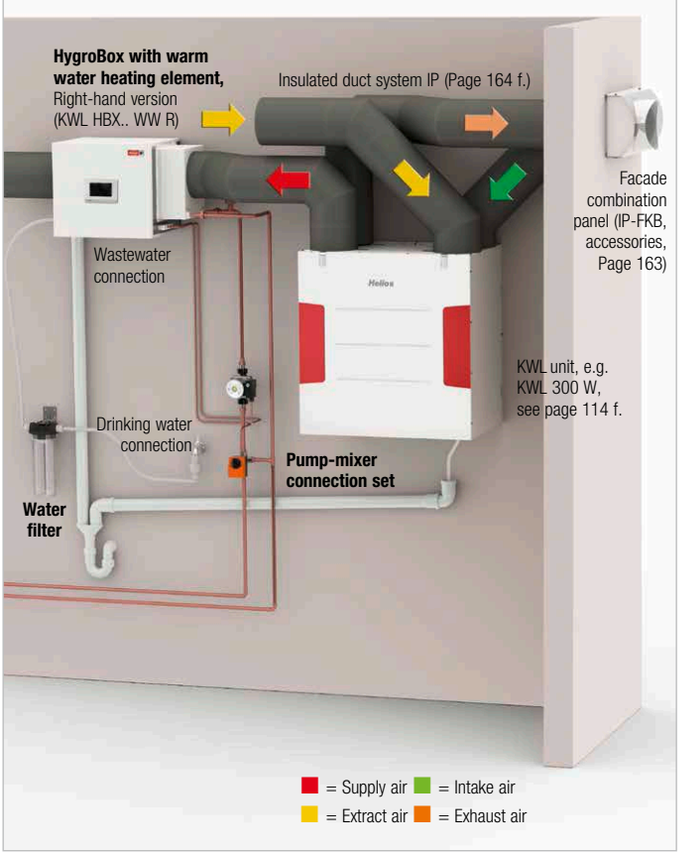
Dimensions in mm

KWL HBX 500 WW L, KWL HBX 500 EH L

Pressure loss KWL HBX



Schematic diagram KWL HBX.. WW R



KWL-NHR

Low-temperature heating element (for KWL HBX.. WW)

Description

- The additional installation of a post-heating element on the HygroBox air outlet is recommended in combination with low-temperature heaters to compensate for the evaporative cooling.
- The external temperature sensor, which is included in the delivery of the post-heating element, must be installed in the supply air duct at a distance of approx. 50 cm behind the post-heating element.

Accessories

Low-temperature post-heating element

– for KWL HBX 250 WW
KWL-NHR 250 Ref. no. 05628

– for KWL HBX 500 WW
KWL-NHR 500 Ref. no. 05633

KWL-PMAS

Pump-mixer connection set (for KWL HBX.. WW)

Description

- For connection of the HygroBox to existing heating circuits.
- Consists of:
  – 1 pc. circulating pump 230 V
  – 2 pc. screw fittings, R 1/2a/15 mm MS (brass)
  – 1 pc. 3-way mixer valve with actuator 230 V, Rp1/2", DN 15.

Accessories

Pump-mixer connection set

– for KWL HBX 250 WW
KWL-PMAS 250 Ref. no. 40193

– for KWL HBX 500 WW
KWL-PMAS 500 Ref. no. 40194

KWL-UVR, KWL-OME

Replacement UVC ducts and osmosis membrane (for all types)

Description

- Helios HygroBoxes are equipped with a constant, automatically monitored UVC disinfection system which effectively kills all germs and bacteria.
- In addition, the water in the evaporator tray is automatically changed depending on the water hardness and evaporation performance.
- A reverse osmosis unit protects the unit against limescale deposits.
- The hygienic safety of the HygroBox is documented and certified by experts.

Accessories

Replacement UVC ducts
KWL-UVR Ref. no. 05631

Replacement osmosis membrane
KWL-OME Ref. no. 05632

KWL-WF

Replacement water filter (for all types)

- As a general rule, the water filter in the water supply pipe must be replaced every 6 months. The filter replacement is indicated on the HygroBox display.

Accessories

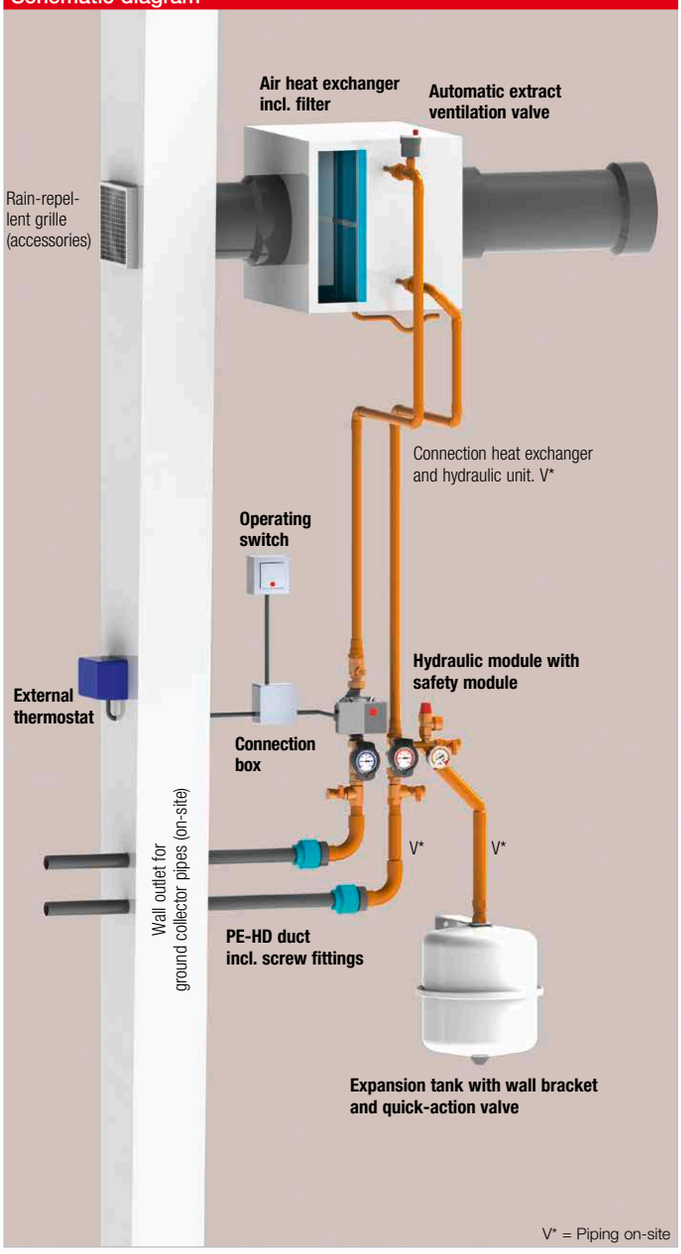
Replacement water filter
Unit = 1 pc. filter cartridge (without casing, without hoses)
KWL-WF Ref. no. 05630

Technical data

	With electric heating element				With warm water heating element			
	For KWL units up to 250 m³/h flow rate		For KWL units up to 500 m³/h flow rate		For KWL units up to 250 m³/h flow rate		For KWL units up to 500 m³/h flow rate	
	Type	Ref. no.	**Type**	Ref. no.	**Type**	Ref. no.	**Type**	Ref. no.
Right-hand version (air outlet right) **Left-hand version** (air outlet left)	**KWL HBX 250 EH R** **KWL HBX 250 EH L**	40188 40187	**KWL HBX 500 EH R** **KWL HBX 500 EH L**	40192 40191	**KWL HBX 250 WW R** **KWL HBX 250 WW L**	40186 40185	**KWL HBX 500 WW R** **KWL HBX 500 WW L**	40190 40189
Adjustable relative supply air humidity in %	40-60		40-60		40-60		40-60	
Adjustable supply air temperature °C	15-25		15-25		15-25		15-25	
Air volume flow m³/h	350		500		350		500	
Power consumption max. W	1450		2850		100		100	
Heat output W	1400		2800		2000		4200	
Voltage/Frequency	230 V~, 50 Hz		230 V~, 50 Hz		230 V~, 50 Hz		230 V~, 50 Hz	
Water connection	3/4“		3/4“		3/4“		3/4“	
Water drain Ø mm	40-50		40-50		40-50		40-50	
Weight (empty weight/operating weight) approx. kg	25		47		25/28		47/53	
Accessories								
Pump-mixer connection set	—		—		**KWL-PMAS 250**		**KWL-PMAS 500**	
Ref. no.	—		—		40193		40194	
Low-temperature post-heating element	—		—		**KWL-NHR 250**		**KWL-NHR 500**	
Ref. no.	—		—		05628		05633	
UVC ducts	**KWL-UVR**		**KWL-UVR**		**KWL-UVR**		**KWL-UVR**	
Ref. no.	05631		05631		05631		05631	
Water filter	**KWL-WF**		**KWL-WF**		**KWL-WF**		**KWL-WF**	
Ref. no.	05630		05630		05630		05630	
Osmosis membrane	**KWL-OME**		**KWL-OME**		**KWL-OME**		**KWL-OME**	
Ref. no.	05632		05632		05632		05632	

SEWT kit

Schematic diagram



The ground-to-brine heat exchanger SEWT significantly increases the efficiency of ventilation units with heat recovery! SEWT saves even more energy and minimises heating costs. The optimal addition for ventilation units with heat recovery.

Advantages

- Additional preheating and prevention of icing during the cold season.
- Pleasant "natural cooling" on hot days.
- Complete kit with coordinated components.

Functional principle

The ground-to-brine heat exchanger SEWT utilises the ground temperature which is relatively constant throughout the year. The ground collector pipe is installed is laid in the ground at a depth of approx. 1.2 m. The hydraulic unit ensures the circulation of the brine depending on the outdoor temperature.
The brine serves as a heat transfer medium and releases the heat to the supply air through the heat exchanger module.

This results in the following:

- During the cold season
  The preheating of cold intake air of up to 14 K.
  Thus, the intake air is normally at a temperature above 0 °C when it reaches the ventilation unit with heat recovery (anti-icing operation). This results in a higher supply air temperature and a positive effect on the total energy balance. Post-heating is only necessary in case of very low outdoor temperatures.
- On hot summer days
  The ground-to-brine heat exchanger reduces the intake air temperature.
- During the transitional period
  The brine is circulated depending on the outdoor temperature measured via the thermostats. The intake air is always energetically optimised when it reaches the ventilation unit, which additionally saves energy – the indoor climate is always comfortable.

Planning information

- In order to maximise the heat transfer, the ground collector pipe should be laid at a depth of at least 1.2 m, since the temperature there is constantly approx. 8–12 °C throughout the year. The ground temperature increases and stabilises with installation depth.
- In order to increase the heat transfer, the pipe should be laid directly in the ground in a sand bed. Furthermore, if ground collector pipes are laid in parallel, the distance should not be less than 0.5 m (from pipe to pipe).
- There is also the option of probe drilling as an alternative to surface laying.

Delivery

- The ground-to-brine heat exchanger SEWT is delivered as a kit corresponding to the course of processing on-site and for optimised transportation.
  The complete set guarantees the absolute precision fit and functional reliability, because all individual components are matched to each other. The kit consists of three sets, which are described on the adjacent page.

SEWT kit	Ref. no. 02564

Pictorial schematic

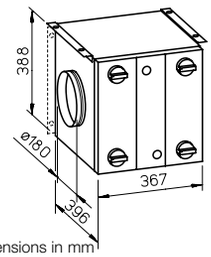
The pre-insulated duct system IsoPipe should be used to prevent condensation.
Alternative: Spiral duct with additional insulation.

SEWT-W

SEWT-H

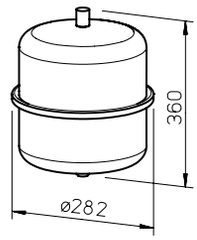
SEWT-E

Dimensions SEWT-W



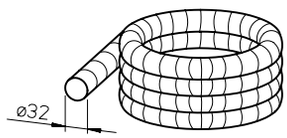
Dimensions in mm

Dimensions SEWT-H



Dimensions in mm

Dimensions SEWT-E



Dimensions in mm

Heat exchanger module

Description

- Highly efficient ground-to-brine heat exchanger unit with aluminium blades for optimal heat transfer to the intake air. Connection duct Ø 12 mm made of copper.
- Double-walled, fully insulated casing made of steel sheet (20 mm insulation, white powder-coated. With mounting bracket for wall or ceiling mounting.
- Connector Ø 180 mm with double lip seal.
- Variable air flow direction through convertible air filter.
- With integrated air filter, class ISO Coarse 75 % (G4). Prevents the ingress of dirt, insects, etc.
- Inspection panels are easy to open without tools for quick and easy access to the filter.
- Condensate drain connector incl. siphon, Ø 1/2".

Accessories

Replacement air filter class ISO Coarse 75 % (G4)

Unit = 3 pcs.

ELF-SEWT-F	No. 02568

Hydraulic module and control

Description

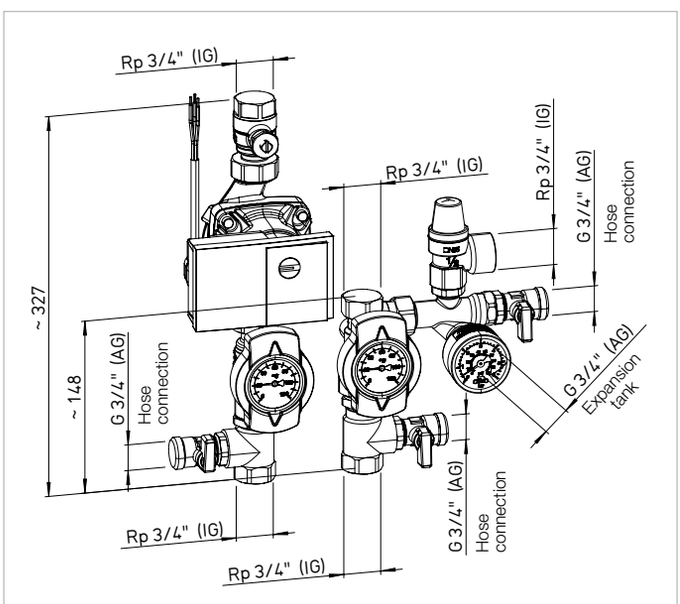
- Complete hydraulic kit with all components necessary for the connection of the ground-to-brine heat exchanger system and the corresponding control unit for automatic or manual system operation.

Delivery

- Brine pump unit (230 V) incl. safety module.
- Flow and return temperature display.
- Automatic quick-vent valve with non-return valve.
- Membrane pressure expansion tank – 12 litre, connection 3/4", incl. wall bracket and quick-action valve.
- Thermostat module with 2 setpoints for automatic control of the brine circuit in summer / winter operation.

- Switch unit for switching between automatic (thermostatic operation) and manual control of the brine circuit (incl. separate connection box – no Fig.)

Technical data Thermostat	
Load capacity	16 A (4 A ind.)
Voltage	230V, 50/60Hz
Protection category	IP54
Wiring diagram no.	906
Temperature range (adjust.)	2 x 0 – 40 °C
Technical data Hydraulic module	
Current consumption max.	0.44 A
Voltage	230 V, 50 Hz
Power consumption	3 – 45 W
Protection category	IP44



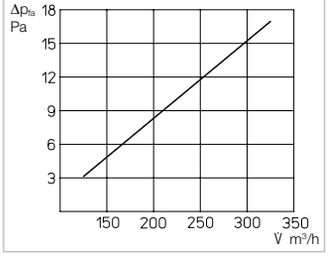
Ground installation set with screw fittings and 20 l ethylene glycol.

Description

- Flexible PE-HD ground collector pipe (PE-HD = polyethylene high-pressure pipe), wall thickness 2.9 mm, external Ø 32 mm. Delivered in 100 metre bundle.
- Specifically designed for ground installation.
- Screw fitting set made of high-quality polypropylene (PP) for connection of the ground collector pipe to the hydraulic unit.
- The screw fitting set (32-1") has an active seal system.
- 20 l canister of ethylene glycol, free from amines and nitrites. Sufficient for completely filling the duct system with a 25 % glycol-water mixture.

Technical data SEWT-W

Pressure loss Heat exchanger module
with filter ISO Coarse 75 % (G4) in pure state



Reference

The SEWT kit offers functional reliability and accuracy of fit in addition to the package price saving:

Type	**Ref. no.**
SEWT kit	02564

The individual components of the SEWT kit are to be ordered separately:

Type	**Ref. no.**
SEWT-W	02565
SEWT-H	02566
SEWT-E	02567

LEWT kit

The ground-to-air heat exchanger LEWT further optimises the efficiency of ventilation units with heat recovery.

Advantages

- ZAdditional preheating during the cold season without any additional energy requirements.
- Prevention of icing of the heat exchanger.
- Pleasant cooling on hot days.
- Additional post-heating of supply air is only necessary in case of very low outdoor temperatures.
- Complete kit with coordinated components.

Functional principle

The ground-to-air heat exchanger LEWT utilises the fact that the ground temperature remains relatively constant throughout the year. The intake air is drawn through an upstream ground collector pipe. This can be installed in an existing construction pit at a depth of approx. 1.2 to 1.5 m; the total pipe length should be at least 40 m.

- This results in the following:
- During the cold season
  The preheating of cold intake air of up to 14 K. Thus, the intake air is normally at a temperature above 0 °C when it reaches the ventilation unit with heat recovery (anti-icing operation). This results in an increased heat recovery rate and a higher supply air temperature. Post-heating is only necessary in case of very low outdoor temperatures.
- On hot summer days
  The ground-to-air heat exchanger reduces the intake air temperature.
- During the transitional period
  Intake either through the ground collector or direct intake opening. This is dependent on the outdoor temperature measured via the thermostats. The electric bypass shutter automatically controls the ideal intake volume. The intake air is always energetically optimised when it reaches the ventilation unit, which additionally saves energy – the indoor climate is always comfortable.

Delivery

- The ground-to-air heat exchanger LEWT is delivered as a kit corresponding to the course of processing on-site and for optimised transportation. It consists of three sets, which are described on the adjacent page.
- The individual components are perfectly matched to each other and form a system. This guarantees simple, quick and precise installation as well as high functional reliability.

Planning information

- In order to maximise the heat transfer, the ground collector pipe should be laid at a depth of at least 1.2 m, since the temperature there is constantly approx. 8 °C throughout the year. The ground temperature increases and stabilises with installation depth.
- During installation, it should be ensured that there is a gradient of at least 2% for the condensate drain.
- In order to increase the heat transfer, the pipe should be laid directly in the ground in a sand bed. Furthermore, if ground collector pipes are laid in parallel, the distance should not be less than 1 m (from pipe to pipe).
- A minimum bend radius of 1 m is recommended to minimise the air-side pressure loss.

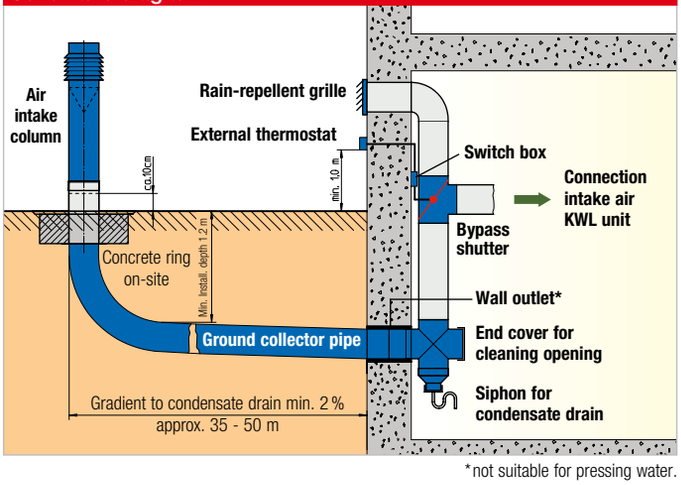
Complete kit
consisting of ground collector pipe, outlet wall bushing, air intake column, control and pipe fittings.

LEWT kit	Ref. no. 02977

Pictorial schematic for installation in buildings with basements

The ground collector pipe enters the building via an underground wall outlet.

Schematic diagram

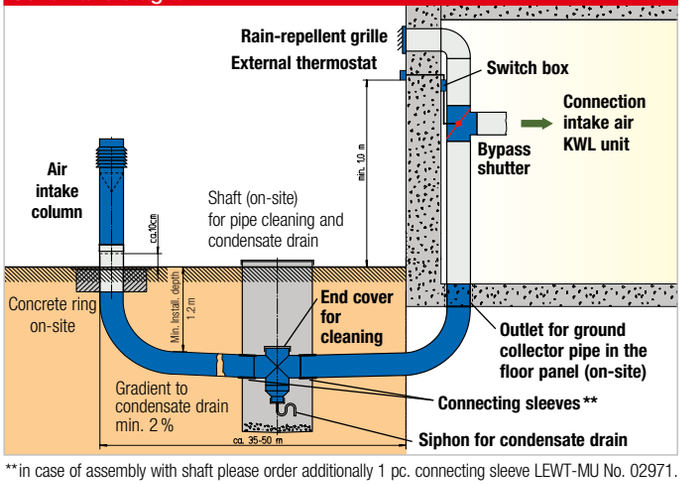


*not suitable for pressing water.

Pictorial schematic for installation in buildings without basements

The ground collector pipe is placed in the building via the floor panel. A shaft must be provided on-site for inspection purposes.

Schematic diagram



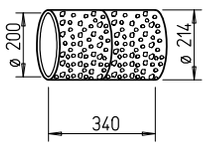
**in case of assembly with shaft please order additionally 1 pc. connecting sleeve LEWT-MU No. 02971.

LEWT-E+M

LEWT-A

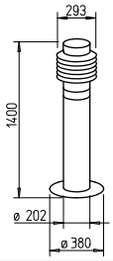
LEWT-S+F

Outlet wall bushing

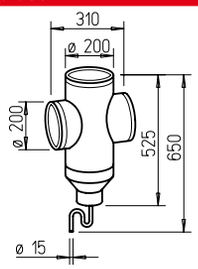


Dimensions in mm

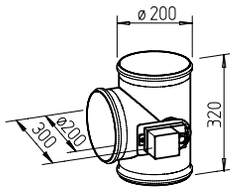
Air intake column



Crosspiece



Bypass shutter



Ground collector pipe and wall outlet LEWT-E+M

Description

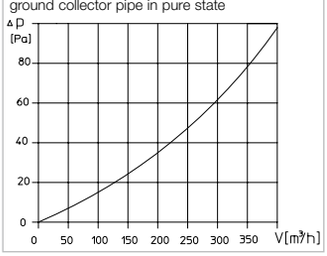
- ☐ FFlexible, externally corrugated and internally smooth ground collector pipe with low air resistance; external Ø 200 mm.
- ☐ Coextruded composite pipe made of physiologically and toxicologically safe polyethylene (PE-HD). Antibacterial, antistatic inner wall. Specifically developed as a ventilation duct for ground installation.
- ☐ Easy to clean, fulfils DIN 1946-6 (VDI 6022).
- ☐ 100% odourless, assured top quality level excludes the transmission of harmful substances and vapours.
- ☐ The PE-HD material achieves double the conductivity of PP with comparable wall thicknesses / pipe cross-sections. In comparison to PVC, the heat conductivity is two and a half times better.
- ☐ Delivered in bundle with 2 x 25 liner metres. Includes wall outlet DN 200 made of polypropylene (sanded), profile seal rings, connecting sleeve and seals.
- ☐ Ground collector pipe, wall outlet and profile seal rings comply with protection category IP 67 when processed according to instructions.

Air intake column LEWT-A with filter

Description

- ☐ Air intake column in modern design and aesthetic stainless steel look for supply air intake.
- ☐ Simple plug-in connection between the intake column and ground collector pipe.
- ☐ Fixation with support plate or bordering plate (on-site) in drywall construction or set in concrete.
- ☐ All parts made of stainless steel.
- ☐ With integrated cone air filter, class ISO Coarse 60 % (G4). Prevents the ingress of dirt, insects and contaminants.
- ☐ Cone filter must be removed by hand for cleaning and replacement after removing the blade head.

Pressure loss Air intake column
with filter ISO Coarse 60 % (G4) and 40 metre ground collector pipe in pure state



Control and moulded duct parts LEWT-S+F

Description

- ☐ Automatic control of air intake via the ground collector pipe or directly from the outdoor area depending on the outdoor temperature measured by the thermostat.
- ☐ Temperature range for direct intake individually adjustable at thermostat.
- ☐ The desired operating mode can be manually selected.

Delivery

- ☐ Bypass shutter NW 200 with actuator 230 V; for vertical installation using the crosspiece.
- ☐ Crosspiece for connection to the wall outlet. Includes cleaning opening, condensate collector, siphon and end cover.
- ☐ Rain-repellent grille (no Fig.) as wall cover for direct intake opening. Prevents the ingress of rain, small animals and insects into the intake air duct.

Technical data Thermostat	
Load capacity	16 A (4 A ind.)
Voltage	230V, 50/60 Hz
Protection category	IP54
Wiring diagram no.	798.1
Temperature range (adjust.)	2 x 0 – 40 °C
Technical data Actuator	
Voltage	230V, 50/60 Hz
Power consumption	1.5 W
Protection category	IP54

- ☐ Setpoint adjuster and thermostat for automatic and manual bypass shutter control. For attachment in weatherproof location in the outdoor area on the north side of the building at a height of approx. 1 m.

Dim. in mm B 200 x H 90 x T 70

- ☐ Switch box with double toggle switch for following operating modes:
  - Thermostatic operation, automatic
  - Ground heat, manual
  - Intake air, manual

Dim. in mm W 110 x H 180 x D 100

Accessories

Replacement air filter class ISO Coarse 60 % (G4)
Unit = 3 pcs.

ELF-LEWT-A	Ref. no. 02975

Additional connecting sleeve
Includes 2 pcs. seal rings.

LEWT-MU	Ref. no. 02971

Reference

The individual components of the LEWT kit are to be ordered separately:

Type	Ref. no.
LEWT-E+M	02991
LEWT-S+F	02990
LEWT-A	02992
LEWT crosspiece	02967